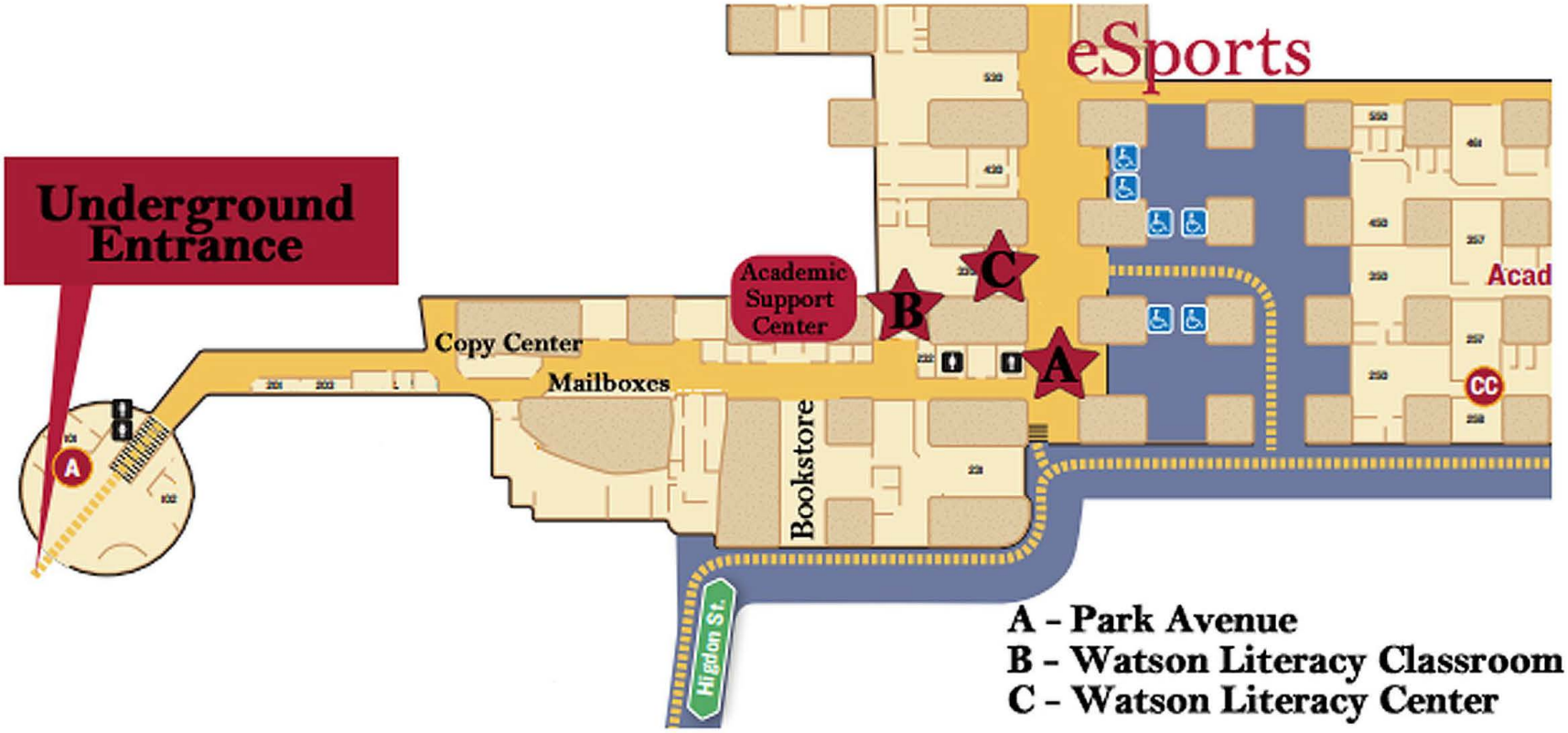
PARK UNIVERSITY

17TH ANNUAL

Student Research & Creative Arts Symposium

Spring 2022

PARK UNIVERSITY UNDERGROUND



Schedule of Events

Date	Event	Location	Chair
Monday – April 18			
9:00–11:15	Scientific Oral Presentations I	Watson Literacy Classroom	Alex Silvius
9:00–12:00	Graphic Design Presentations	Park Avenue	
9:00–12:00	Interior Design Presentations	Park Avenue	
1:00–2:30	Scientific Oral Presentations II	Watson Literacy Classroom	Alex Silvius
3:00–3:45	Honors I Oral Presentations	Watson Literacy Center	Patty Ryberg
Tuesday – April 19			
9:00–12:00	Art Presentations	Park Avenue	
9:00–12:00	Posters	Park Avenue	
9:00–10:00	Communication & Psychology Oral Presentations	Watson Literacy Center	Patty Ryberg
10:15–12:45	Criminal Justice Oral Presentations	Watson Literacy Center	Greg Plumb
1:00–2:15	Literature Oral Presentations	Watson Literacy Center	
1:30–12:00	Scientific Oral Presentations III	Watson Literacy Classroom	Alex Silvius
2:30–3:30	Honors II Oral Presentations	Watson Literacy Center	Patty Ryberg

MONDAY APRIL 18
9:00 – 12:00
GRAPHIC DESIGN PRESENTATIONS
PARK AVENUE
Mentored by Jeff Smith, Assoc. Prof. of Graphic Design

Weisz-Rahner Museum of Illusions Group Project

Faith Beaty, Senior – Graphic Design
Vincent Rackin, - Senior – Graphic Design
Clara Zarate – Senior – Graphic Design
A group representation of a visual design for the promotional of a conceptual museum

Kiks

Jennifer Bernal – Senior – Graphic Design
Connor Garcia – Senior – Graphic Design
This is a design campaign for a shoe museum in Chicago. The project had design elements such as brochures, posters, ads, postcards etc.

Digital Illustrations

Jennifer Bernal – Senior – Graphic Design
I want to display my digital illustrations. I mainly draw portraits.

Watt & Son's: Energy Museum

Jacob Gray – Senior – Graphic Design
Paul Madsen – Senior – Graphic Design
Thiago Tucci – Senior – Graphic Design
The goal of this project was to work as a group to create and develop a brand strategy for an electricity themed museum. This required developing ads, posters, brochures, deliverable items, and a display that encapsulates and enhances the experience of the viewer.

Spy Museum Campaign

Emily Rawhouser – Senior – Graphic Design
Jennifer Morales – Senior – Graphic Design
Jenifer Rutiaga – Senior – Graphic Design
This is our group project for the Graphic Design Senior Studio. It is an original museum campaign which focuses on women in espionage.

Curated Cultures

Courtney Ross – Senior – Graphic Design
Brianna Winters – Senior – Graphic Design
Alaina Cooper – Senior- Graphic Design
Design Seniors Bree Winters, Alaina Cooper, and Courtney Ross present the design exhibition for "Curated Cultures", a cheese museum celebrating the history behind one of the world's favorite foods.

It was a lie when they smiled and said, "You won't feel a thing"

Clara Elena Zarate – Senior – Graphic Design

Just a presentation of visual media done during my final year at Park

New Renaissance

Tyson Johnson – Senior – Graphic Design

I wanted to take inspiration from the renaissance era and remix it a bit to fit me. The fabrics and heavy layers always had a bit of weight that you could feel in paintings and I wanted to mimic that digitally. I always wanted an excuse to see what a renaissance "me" would look like.

MONDAY APRIL 18
9:00–12:00
INTERIOR DESIGN
PARK AVENUE
Mentored by Roxann Sherrodd, Asst. Prof. of Interior Design

Montessori Academy of Kansas City

Keely Carnes – Senior – Interior Design

A poster of Floor plans and renderings of a Montessori school I designed.

Sleep Soundly Retail Space

Lauren Fabac – Senior – Interior Design

The laid-back experience of Sleep Soundly will entice customers to choose shopping in-person during a time where shopping online has become widespread. Located in the urban scene of the River Market neighborhood in Kansas City, Missouri Sleep Soundly will bring a unique presence to the iconic downtown district. The objective of the design is to provide a safe in-person shopping experience while also giving the customer a one-of-a-kind scene to find the utmost of comfort in fashionable loungewear and sleepwear.

Everlasting Events(pace)

Diamond Gordon – Senior – Interior Design

This event space that I have created embodies everything an event could desire. It emphasizes flexibility throughout its design to accommodate a wide variety of events, and promotes engagement, to help people feel connected throughout this experience, and keep recommending our space, to others.

LEAD CTEC Academy

Sonja Gormley – Senior – Graphic Design

LEAD CTEC Academy is a multi-story career and technical education facility, sustainably designed to teach and promote Skilled Trades at the high-school level.

Senior Thesis: Anomaly Bed & Breakfast

Kasia Penyock – Senior – Interior Design

Ongoing senior thesis project focusing on artistry hospitality design showcased through a bed and breakfast.

Senior Thesis

Sydni McGuire – Senior – Interior Design
This poster will display my hard work on my thesis project that I spent an entire year focusing on to design.

Senior Thesis – Love's Hotel

Victoria Staerke – Senior – Interior Design
Senior Thesis focused on hospitality and historic preservation on the example of an old castle turned into a boutique hotel.

MONDAY APRIL 18
9:00 – 11:00
SCIENTIFIC ORAL PRESENTATIONS
WATSON LITERACY CLASSROOM
Mentored by Alexander Silvius, Assoc. Prof. of Physics

9:00 Moderate Alcohol Consumption as a Factor for Adverse Brain outcomes and Cognitive Decline

Keysy Martinez – Senior – Biology
Alcohol use is widespread and increasing across the world. It has historically been viewed as harmless in moderation which is defined from 9-18 units a week. However, recent evidence shows that moderate levels, is associated with adverse brain outcomes.

9:15 The Therapeutic Effect of CBD on Alzheimer's Disease

Rochelle Garciano – Senior – Biology
For my presentation I will explain the advancements made in researching alternative medicine for Alzheimer's disease (AD). Specifically, I will be focusing on CBD oil and therapeutic effect it can have on patient's taking it while having AD, as well as describing life quality of those on CBD.

9:30 Parkinson's Disease: Exercise Treatments to Improve Quality of Life

Benjamin Spicer – Senior – Biology
A review of the pathology and symptoms related to Parkinson's disease and relevance to the overall population. Patients with Parkinson's disease experience symptoms negatively effecting their quality of life as the disease progresses. Exercise treatments, either land-based, aquatic, or virtual reality, can provide pain relief and reduce potential deadly falls. The most effective treatment regimens are able to enhance Parkinson's patients' quality of life dramatically.

9:45 The Difference on Side Effects on Genders After Cancer Treatments

Caio Alves – Senior – Chemistry
After reviewing a high number of clinical trials, some treatment lead to more side effects on women than men.

10:00 Cruciferous Vegetables Disc Bioassays Modified for Anticancer Agents

Alba Myshketa – Senior – Biology & Chemistry

The main purpose of this research project is to investigate the effects of anticancer agents in cruciferous vegetables such as potatoes, carrots, turnips, beads, and Brussels sprouts, regardless. of Agrobacterium were selected to grow in cultures and then the induced tumor will be applied to a cross-section sample of he vegetables. The protocol for this experiment requires an incubation period of two weeks under dry conditions and room temperature. Using a dissecting microscope after staining will help compare the differences in the tumor morphology between the control and the induced tumor vegetables and also the number of tumors grown in the cross-sections of vegetables.

10:15 The Anatomy of Death

Farukh Gaibov – Senior – Biology

All living organisms experience a death. Though the notion of death can make one uncomfortable, cell death and the formation of new cells happen on a daily basis. Without a cell death, humans would accumulate 2 tons of bone marrow and approximately 10 miles of intestinal tissue over 80 years of life (Hotchkiss et al., 2009). Thus, cell death becomes an important process to maintain normal physiology and homeostasis for multicellular organisms (Kannan and Jain, 2000). Cell death can be divided into three categories. The first type is apoptosis programmed cell death. Usually, controlled by a DNA sequence that signals the cell to commit suicide. The second type is necrosis. Necrosis occurs when a cell experiences damage, usually to its plasma membrane when the extracellular fluids go inside the cell, and all the internal components leak out of the cell leading to cell death. And the third type is autophagy. During autophagy, the cell experiences a lack of nutrients to survive. To produce some energy, the cell starts to break down its own organelles. When the process of autophagy reaches a certain point, it becomes irreversible and the cell then enters the cell death pathway (Hotchkiss et al., 2009). The paper will focus on specific apoptotic processes, specifically oxidative stress, usually correlated with cell aging that leads to cell death. During normal metabolism, cells produce a free radical as a byproduct. Since mitochondrion is responsible for energy production and metabolism, it is well established that it serves as the main source of oxygen radicals. To counteract the negative effect of free radicals, a cell has anti-oxidant defense mechanisms like glutathione peroxidase, glutathione reductase, superoxide dismutase, catalase and etc. When the production of an anti-oxidant defense system is not enough or existing anti-oxidants are overwhelmed by the excess of oxidative agents, oxidative stress occurs. That ultimately leads to the initiation of transcription factors like NF-kB, p53, and AP-1 that trigger the apoptotic process and cell death (Kannan and Jain, 2000).

People for centuries and millennia tried to find a solution for immortality and longevity. Understanding the details of cell death can potentially open a new horizon of studies to discover the solutions for longer life.

10:30 Stem Cells for Treating Age Related Macular Degeneration

Jack Lindgren – Senior – Biology

Age-Related Macular degeneration is the most common cause of major vision loss in adults over the age of 65. With no currently available medications for most cases, stem cell research to replace retinal cells provides a promising future for those with the disease.

10:45 The Use of Biosensors to Measure Glucose Levels

Mihaela Robinson – Senior – Biology

This presentation will examine the technological buildup of continuous glucose monitors (CGM) and how they are able to read glucose levels through interstitial fluids. I will specifically look at the Freestyle Libre and the accuracy of that device, I will then analyze future prospects to better enhance accuracy and duration of CGM use.

11:00 Three powerful plants for the improvement of prediabetes

Gianella Sotil – Senior – Biology

Pre-diabetes means that you have a higher than normal blood glucose level. It's not yet high enough to be considered type 2 diabetes, but without lifestyle changes, adults and children with prediabetes are more likely to develop type 2 diabetes. With the rapid advancement of technologies and the increase in antidiabetic plant research, many new herbs and their active ingredients have been discovered that may lead us to develop new antidiabetic agents to complement current chemotherapies. reviewed the hypoglycemic effects of various plants with antidiabetic properties, the results of which were incredibly productive.

MONDAY APRIL 18
1:00–2:30
SCIENTIFIC ORAL PRESENTATIONS
WATSON LITERACY CLASSROOM
Mentored by Alexander Silvius, Assoc. Prof. of Physics

1:00 Spinal Cord Injuries and the Methods to Fully Repair Them

Micheal Brown – Senior – Biology

A review of how spinal cord injuries affect the body, current treatment methods, and experimental treatments that are being explored to advance the recovery.

1:15 Tommy John Surgery

Angel Colon – Senior – Biology

Tommy John Surgery is an ulnar collateral ligament reconstruction of the elbow. It was invented in 1971 by Dr. Frank Jobe. The first player or athlete to have the surgery was Dodgers pitcher Tommy John. This procedure is designed to repair a torn elbow ligament, called the Ulnar Collateral Ligament. An injury usually caused by forceful, repetitive overhead throwing motions or dislocation of the elbow. It was first performed in 1974 on baseball pitcher Tommy John. Frank Jobe, M.D., will likely be the first physician to be inducted into the Hall of Fame. The ulnar collateral ligament extends from the medial epicondyle of the humerus to the olecranon of the ulna. It is triangular in shape and is composed of three parts: an anterior, a posterior and an inferior fascicle. The percentage of Tommy John surgery over the years has increased. Some of the reasons for the increase in elbow injuries are: the high speeds increased over the years, excessive hitting at a young age and lack of rest. Over time the Major League Baseball (MLB) organization recommended some options to decrease elbow ligament injuries. Some of those options were pitch count by age, rest days depending on the amount of pitching and rehabilitation during rest. After a Tommy John surgery it is recommended to rehabilitate with Physical therapies for at least 7 to 9 months. These 9 months are divided into 4 phases. If the phases were carried out to perfection, the player will most likely return to the same level of play. The purpose of my Speech is to show you why Tommy John surgery increases over the years and the percentage of athletes who return to play after surgery and at what level. You will be given a little background on the history of the surgery at the beginning and the process of surgery eight will be explained to you.

1:30 Overview on Organ Transplants

Jordan Koren – Senior – Biology

This presentation will be an overview on organ transplants. It will cover the history of transplants, the current process of transplants and will include some future goals in the transplant world.

1:45 The Biology and Utility of Platelet Rich Fibrin

Reid Evers – Senior – Biology

An explanation of platelet rich fibrin (PRF), including how it is made, why it works, and common use cases within the fields of dentistry and oral surgery.

2:00 Birth Defects - Surviving the Statistics - Advocating for the Unborn

Zachariah Zimny – Senior – Biology

My presentation will provide an overview of the prevalence of birth defects, go through the major causes, the major structural and functional birth defects, and touch on two major teratogenic pharmaceuticals that are typically unavoidable to discontinue during pregnancy, as well as a quick idea for how the medical community at larger can work to better aid potential mothers with lowering risks of pharmaceutical teratogens.

2:15 Quantum Immortality

Selena Galloway – Senior – Biology

Quantum immortality is a thought experiment about what happens when you combine quantum-many-stateness with the anthropic principle and survivorship bias.

MONDAY APRIL 18
2:00 – 3:00
HONORS ACADEMY PRESENTATIONS
WATSON LITERACY CENTER

2:00 The Persian Empire: Religious origins through literature

Hannah Pappert – Senior – English & Communication

My presentation focuses on the ancient Persian/Achaemenid Empire and uses a comparative analysis of early religious, folk, and political literature to gain a better insight into how the Zoroastrian religion of later Persia took root.

Mentor: Patty Ryberg, Assoc. Prof. Biology

2:15 The Effects of Nutraceuticals on *Escherichia coli* Biofilm formation

Lucy Fine – Senior – Biology

This research studies the synergistic effect of cranberry, d-mannose, and propolis in various combinations to prevent Escherichia coli biofilm formation. Preliminary results indicate that not all combinations result in decreased biofilm.

Mentor: Brenda Royals, Lecturer in Biology

2:30 Investigating the Perceived Ethicality of the Decoy Effect

Abigayle Barnett – Senior – Business Administration: Marketing

I surveyed Park University students and analyzed their thoughts about the marketing tactic of the Decoy Effect. Based on this collected data, I will discuss whether the Decoy Effect, while effective, is viewed by students as an ethical means of influencing consumer purchasing decisions.

Mentor: Brad Kleindl, Prof. of Marketing

2:45 Moria

Morgan Ohland – Senior – Interior Design

Moria is a project that analyzes the pre-existing intersection of sustainability and historic preservation, specifically in a commercial space.

Mentor: Roxann Sherrodd, Asst. Prof. of Interior Design

TUESDAY APRIL 19
9:00 – 12:00
ART PRESENTATIONS
PARK AVENUE

Colorful Dimension

Barbara Almeida – Junior – Fine Arts

My presentation consists in showcase some of my ceramic works I have done in class and also some paintings.

Mentor: Andrea Lee, Asst Prof. of Art

La Femmina - Ceramics I

Grace Neiderhiser – Senior – Psychology

La Femmina is a coil built vessel inspired by traditional Greek and Italian sculptures.

Mentor: Elaina Michalski, Lecturer in Fine Art

Fall and Spring Creations

Charlie Pierce – Senior – Fine Arts

Paintings and ceramic works created throughout the Fall 2021 and Spring 2022 semesters.

Mentor: Elaina Michalski, Lecturer in Fine Art

Art by Sky Creations

Skylar Seitz – Senior – Fine Arts

I hope to include in my presentation a combination of 2 drawings (each 18"x24") and 2 ceramic works. The drawings are still-lives and the ceramic works are sculptural.

Mentor: Elaina Michalski, Lecturer in Fine Art

Luther Morales's Illustration and Painting Portfolio

Luther Morales – Sophomore – Graphic Design

I have 11 drawing portraits and 5 paintings I would like to show case.

Mentor: Andrea Lee, Asst. Prof. of Art

Dungeons and Dragons and Illustration: Kayley's Work

Kayley Tolle – Senior – Fine Art

This is a group of works created by Kayley Tolle, whether it be dungeons and dragons art featured on tarot cards, other illustrative works, or focusing in on mythical creatures, they're all there. This is a focus on works mainly from their senior semester.

Mentor: Andrea Lee, Asst. Prof. of Art

Three Dimensional artwork

Jazmin Gutierrez – Junior – K–12 Art Education

I will be presenting my artwork from my AR143 course

Mentor: Elaina Michalski, Lecturer in Fine Art

A world of color

Kierra Taylor – Senior – Fine Art

In my art presentation I will be displaying some of my recent artworks made from numerous different mediums. Despite the variation in style and medium, the use of bright eye-catching colors carries through in all of my work. As an artist I feel that color is an important characteristic in art and depending on which colors are used, different kinds of emotions can be evoked in the viewer.

Mentor: Andrea Lee, Asst. Prof. of Art

Emily Dew's Art 2021 – 2022

Emily Dew – Senior – Communications

A body of work that shows an exploration of new processes, techniques, and use of materials. With a focus on women and nature, there is a very rich feeling of strength and beauty.

Mentor: Andrea Lee, Asst. Prof. of Art

Finding Me

Rushine R. Raymond – Senior – Fine Arts

How does one Express themselves, if they don't know who they are? That is the same dilemma I am trying to figure out with My Art. It's called "Running for Office".

Mentor: Andrea Lee, Asst. Prof. of Art

Paperclip Garment

Brock Beashore – Sophomore – Graphic Design

This is a garment made out of paperclips. It is supposed to be based off of a chainmail armor vest. It is made of 1000 paperclips.

Mentor: Elaina Michalski, Lecturer in Fine Art

Soft Toaster

Brooke Flook – Sophomore – Graphic Design

Recreation of a household object using reused fabric.

Mentor: Elaina Michalski, Lecturer in Fine Art

Drapery Stippling

Rachel Nash – Freshman – Graphic Design

This piece of art that I have created was a reference from another piece of artwork. (that I can't find the name for) When we were handing this project in my drawing one class I didn't really know what I wanted to do with it. After some time of thinking I thought stippling would look really great for this project. Any chance I got I was working on the piece, it took me 12 days to finish this project and I really like the final look at it.

Mentor: Lynn Richardson-Ludwigs, Department of Art and Design

TUESDAY APRIL 19
9:00 – 12:00
POSTERS
PARK AVENUE

My Personal Webpage

Winston Henry Jr – Senior – Management & Computer Information Systems

This is a webpage I developed over the course of seven weeks in CS-240

Mentor: Wen Hsin, Prof. Computer Science

Internship Experience Sharing

Maksim Tsikhanovich – Senior – Information & Computer Science

Ozoda Narzullaeva – Senior – Information & Computer Science

Rudolf Jan Horak – Senior – Information & Computer Science

I am registering a poster with Internship Experience Sharing. Good for motivating students to apply and look for internships

Mentor: Crystal Peng, Assoc. Prof. Computer Science; Wen Hsin, Prof. Computer Science

Closed Structure Constant Formulas for the Universal Enveloping Algebras of the Lie Algebras of Types A1 and D2

Caleb Fernelius – Senior – Mathematics

This is a poster presentation of the research work and findings I have done with Dr. Chamberlin the past year. The poster was to be presented at the Joint Mathematics Meetings in Seattle but the conference was postponed to a date I can no longer attend. The findings in this presentation have been collected into a paper which has been accepted for publication by the PUMP journal of Undergraduate research.

The presentation shows the structure constant formulas we generated, and how we found them using prior established straightening identities for the Lie algebras of Type A_1 and D_2.

Mentor: Samuel Chamberlin, Assoc. Prof. Mathematics

TUESDAY APRIL 19
9:00 – 10:00
COMMUNICATIONS & PSYCHOLOGY ORAL PRESENTATIONS
WATSON LITERACY CENTER

9:00 A Glimpse into Independent Research as an Undergraduate

Raquel Castellano – Senior – Psychology
Nathaniel Lane – Senior – Psychology
This presentation reports on the personal experience of two undergraduate students who are part of the Department of Psychology and Sociology's PEARL Research Laboratory. The PEARL Laboratory offers the opportunity to engage in independent research and educational outreach. While classroom learning is crucial, assisting in extracurricular research provides additional value. We address the additional value in our presentation and offer a personal perspective of the numerous experiences and lessons learned by participating in the PEARL activities.
Mentor: Andrew Johnson, Prof. of Psychology

9:15 Comparison and Contrast of Online Attachment Style Questionnaires

Sarah Mathis – Junior – Social Psychology & Business Administration
Technology allows us to access a plethora of questionnaires that may provide insight into our lives. The purpose of this study is to examine several online questionnaires related to Attachment Style. I conducted a content analysis of six online Attachment Style instruments (4 reputable and 2 less reputable sources). Each instrument was coded for: Response Type (Likert scale or T/F), Relationship Focus (platonic, familial, romantic), Consistent Themes in questions (e.g., intimacy and affection), Reputability, and Demographic Questions. Results showed that themes were relatively similar in all instruments. Less reputable sources presented brief presentation of results and the interpretation of the results. Lastly, more reputable sources contained more items/ statements within their measures and contained more clarity in statements.
Mentor: Andrew Johnson, Prof. of Psychology

9:30 Please Stop Spitting _ADS

Neyamia Powell – Sophomore – English & Psychology
This is an After Dinner Speech about raising children without over-emphasis on gender roles and expectations. It is informational and humorous.
Mentor: Lora Cohn, Assoc. Prof. Communications

9:45 Unconditional Cash Transfers: A solution to poverty

Adam Wilkins – Senior – Nursing
This presentation is over a revolutionary from of foreign aid that changes the mindset of policy makers and shift the focus to the individual while eliminating poverty.
Mentor: Lora Cohn, Assoc. Prof. Communications

TUESDAY APRIL 19
10:15 – 12:45
CRIMINAL JUSTICE ORAL PRESENTATIONS
WATSON LITERACY CENTER
Mentored by Greg Plumb, Prof. Criminal Justice

10:15 Red-Light Traffic Cameras at Intersections

Emily Elizalde Avila – Senior – Criminal Justice

This research is to learn about the effectiveness of traffic cameras at intersections. We will also learn what they are, where they came from, where they are used, and how they are able to identify when a driver has ran a red light.

10:30 Law Enforcement Response Bias

Jack Gunderson – Senior – Criminal Justice

Do Police Officers have a bias when reporting to a crime scene?

10:45 Police Training and Solutions

Alexander Hale – Senior – Criminal Justice

It's about new ideas about how police should be trained and how these new ideas could help police with solving solutions of bridging the gap between law enforcement and citizens

11:00 Eyewitness testimony: Is it reliable or unreliable?

Manika Karki – Senior – Criminal Justice

My presentation would be on the Reliability of Eyewitness testimony. The purpose of this research presentation is to examine how eyewitness testimony can be reliable and to what extent a person can actually remember the incident and present it. Eyewitness testimony has a fatal flaw: It is not always accurate. If a witness provides testimony that is untrue or mistaken, it can lead to a wrongful conviction. Evidence on the reliability of eyewitness testimony is mixed. However, the veracity of eyewitness testimony is often called into question because of factors that influence the ability of a witness to accurately recall an event.

11:15 The Upbringing of a Child on the Influence of Developing Criminal Characteristics

Bayan Salam – Senior – Criminal Justice & Psychology

This presentation will be regarding how the upbringing of a child, whether that be the environment itself, parenting, parental separation, or lack of empathy, affects the chances of a child developing criminal characteristics. This presentation also includes research analyzed throughout surveys that sought to test the perceptions of criminal justice undergraduate students and the upbringing of a child on the influence of developing criminal characteristics.

11:30 Probation and Parole Effectiveness

Rijkaard Jean Baptiste – Senior – Criminal Justice

My presentation will be my research assignment I have conducted on probation and parole effectiveness and the different factors that play into supervision

TUESDAY APRIL 19
10:30 – 12:00
SCIENTIFIC ORAL PRESENTATIONS
WATSON LITERACY CLASSROOM
Mentored by Alexander Silvius, Assoc. Prof. of Physics

10:30 Aquatic Turtle Population Stream Research Study

DiCarlo Jackson Jr. – Senior - Biology

An ongoing study of the aquatic turtle population inhabiting Rush Creek, located near downtown Parkville, MO. There are multiple aquatic turtle species that are commonly found in this area; Common Snapping Turtles (*Chelydra serpentina*), Western Painted Turtles (*Chrysemys picta*), Red-eared Sliders (*Trachemys scripta*), and Eastern Spiny Softshell (*Apolone spinifera*) (Johnson 2000). All these species can disperse over land and could potentially make up this newly forming community. The methodology involved in the process of capturing these turtles and the data accumulated could potentially uncover some important information concerning the population and ecosystem.

10:45 Platte Landing Rush Creek Turtle Project: Introspective into the Diet of Aquatic Turtles Native to Parkville, MO

Hunter Springer – Senior - Biology

Several aquatic turtles native to Missouri include the common snapping turtle (*Chelydra serpentina*), red-eared slider (*Trachemys scripta*), western painted turtle (*Chrysemys picta*), and spiny \
softshell (*Apalone spinifera*). From June to September 2021, a mark and recapture survey of these aquatic turtles was conducted at Rush Creek in Parkville, MO, to examine population diversity and community dynamics. Inferences into turtle diet and trophic levels were made using carbon-13 (^{13}C) and nitrogen-15 (^{15}N) isotopic analysis of nails. Carbon and nitrogen values showed a high amount of dietary overlap among the four species sampled. Generalists with the greatest variation in diet were the western painted turtles and common snapping turtles, as these species were feeding at multiple trophic levels. $\delta^{15}N$ values indicate that western painted turtles were feeding at a lower trophic level than the spiny softshells, common snapping turtles, and red-eared sliders. The dietary habits of the common snapping turtles and red-eared sliders were more closely related than the spiny softshells, which correlates to the former two species being generalists, whereas spiny softshells are carnivorous. In general, the results of this study suggest that the turtles captured at Rush Creek exhibit overlapping dietary habits.

11:00 Cruciate Ligament Ruptures in Canines

Adrianna Solary – Senior - Biology

Canine cruciate ruptures and what they are, how they compare to humans, most common types, and the overall surgical procedure on how to repair them and prevent them.

11:15 Evaluation of gait styles used by dogs completing the weave pole obstacle during dog agility

Megan Weaver – Senior – Biology

Dog agility is becoming a more popular dog sport each year. The sport overall lacks scientific research. A study done by Eicher et al., evaluated and defined paw placement patterns for dogs completing the weave pole obstacle during a dog agility competition. In particular, their research came from observing the dogs run at the 2019 American Kennel Club agility championships. They were able to determine the most efficient running style for dogs completing the weave pole obstacle. Their study hypothesized that dogs would display definitive gait patterns and a single stepping pattern would yield a faster weave pole completion time compared to other weaving styles. Further research into the biomechanics that dogs use while competing in dog agility is recommended.

11:30 Animal Assisted Therapy for Geriatric Patients

Mackenzie Zismer – Senior – Biology

Geriatric patients suffer from a variety of mental illnesses in care facilities. Animal-assisted therapy is utilized as a treatment option for these patients. Studies have shown improvement in the mental and physical health of patients that receive the treatment.

11:45 Oral

Emilyn Richardson – Senior – Biology

I will be talking about what ocean acidification is and how it's affecting marine life.

TUESDAY APRIL 19
1:00–2:15
LITERATURE ORAL PRESENTATIONS
WATSON LITERACY CENTER

1:00 The Utilization of Technology to Provide a Bilingual Education in Secondary Schools in America

Savannah Oesterle – Senior – English & Spanish

An analysis of how American students are currently learning Spanish, as well as recommendations to improve the overall effectiveness of existing programs.

Mentor: Silvia Byer, Prof. of Modern Languages

1:15 Peering Through the Glass

Sheila Madonia – Senior – English

My program will be a compilation of poetry from the time of COVID. It will be individual pieces written during lockdown.

1:30 Mr. Compromise and Mr. Progressive

Brooke Conner – Junior – Secondary Education

Booker T. Washington and W.E.B Du Bois represents two different perspectives in the civil rights movement. This poem shows the shortcomings of both arguments along with highlights the arguments of both activists!

Mentor: Stacey Kikendall, Assoc. Prof. English & Modern Languages

1:45 Setting Symbolism in Harriet Jacob's Slave Narrative

Lillian Floyd – Junior – Secondary Education/English

This presentation will be discussing my midterm project from my Women's Literature class. In this project, I created a diorama that reflects the importance of setting in Incidents in the Life of a Slave Girl by Harriet Jacobs. I particularly look at chapter twenty-one, "The Loophole of Retreat" in which Jacobs in hiding on the very plantation she escaped from

Mentor: Stacey Kikendall, Assoc. Prof. English & Modern Languages

2:00 "Hunt for Humbaba": A D&D Adaptation of the Epic of Gilgamesh

Brandon Schmitz – Senior – English

A module adaptation of an iconic scene of the Epic of Gilgamesh compatible with the popular role playing game, Dungeons and Dragons: 5th Edition. The module includes a unique monster stat block for the titular character, Humbaba, as well as player character interpretations of the heroes Gilgamesh and Enkidu.

Mentor: Stacey Kikendall, Assoc. Prof. English & Modern Languages

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TUESDAY APRIL 19
2:30–3:15
HONORS II ORAL PRESENTATIONS
WATSON LITERACY CENTER

2:30 Sustainability in The Shoe Industry: A Marketing Insight

Kyler Barnett – Senior – Marketing

A look inside the sustainable efforts of shoe companies and how these efforts have helped companies and brands shape their marketing efforts in coordination, while also looking at the consumer reactions and receptions to these efforts.

Mentor: Toni Ford, Asst. Prof. Marketing

2:45 Mindsets of Math and Success

Bethany Harms – Senior – Secondary Education/Mathematics

A case study was performed with seventy-eight private high school students and their teacher concerning their attitude towards mathematics and the ability to learn mathematics. Overall, participant responses were optimistic, and will be covered in more depth.

Mentor: Jennifer Whitley, Lecturer in Mathematics

3:00 Bystander Intervention Behaviors Among College Students

Sophie Craven – Senior – Psychology

My research is examining college students' beliefs about bystander intervention and attitudes about gender role ideas. I examine differences between students who have undergone bystander intervention training and those who have not.

Mentor: Brian Cowley, Prof. Psychology

2022 Symposium

Sponsored by the Park University Honors Academy
College of Liberal Arts and Sciences: James Pasley, Dean
Patricia Ryberg, Director

We would like to thank the Park University students, faculty, and staff who participated to make this even possible

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