



Framingham
State University

Friday, May 7, 2021
Virtual Conference

10TH ANNUAL CELTSS STUDENT CONFERENCE FOR RESEARCH AND CREATIVE PRACTICE



This event is sponsored by the Center for Excellence in Learning, Teaching, Scholarship and Service, the Office of Academic Affairs and the Department of Fashion Design and Retailing.

CELTSS

*Center for Excellence in Learning,
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Welcome to Framingham State University's Tenth Annual Student Conference for Research and Creative Practice!

Today marks our tenth celebration of student scholarly work and faculty support. As students, you have undertaken a special initiative to understand something deeply, working together with your faculty who have shared their expertise and guidance with you. They have done so because they care about you and believe in your future success. The steps you have taken to get to today's presentation will open many doors for you as you move into your professions and careers. Your work, and future work, will improve life for others in multiple ways—improving healthcare; enlivening the arts; creating new strategies for people to understand their own behavior and that of others; enabling businesses to thrive; teaching people of all ages; caring for the planet; and making discoveries in the sciences that make a difference. Keep learning. Keep working. Thank your professors, and continue to expect a lot of yourselves. This is a significant moment. **We are proud of you. Congratulations!**

To Professors Jon Huibregtse, Rongbing Liu, Virginia Noon, Cara Pina, Zahra Tohidinia, and our faculty who serve the university through the Center for Excellence in Learning, Teaching, Scholarship and Service, thank you for your hard work and success in making this event happen. Great work! To our faculty who have mentored these students who are here today, what a community you have created! Clearly, it is something to celebrate. Thank you!

Ellen Zimmerman, Ph.D.

Interim Provost and Vice President for Academic Affairs

Scheduling Note

Due to the ongoing global pandemic, today's conference has been modified from its traditional face to face interactive event to a conference that is safe for all. Student work will be presented in a variety of formats including several live presentations on Zoom starting at 12:30pm, prerecorded presentations, posters, a showcase of fashion design portfolios, and 'mini' runway shows. To access student work, click on the title, student name, or Zoom link for each student presentation.

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Fashion Design and Retailing Portfolio Day

Design Students presenting final senior design portfolio

FASH 487 Apparel Design Portfolio (Capstone course)

A capstone experience to organize and present design work created in the Apparel Design concentration and to produce a portfolio appropriate for obtaining a professional position in the apparel industry. Students develop a portfolio to demonstrate knowledge and skills in a variety of garment categories; hand and digital illustration; technical sketching techniques; and original full-scale garments. Ideas are assembled in a professional format by integrating the components of design, fabric, and end use.

Click on the titles below to view the presentations.

Student Design Portfolio Presentations <i>Sponsor: Seunghye Cho</i>	
Designer's Name	Designer's Statement
Sabrina Barandiaran	<p><u>Extravagant Ideals</u> Dark slim gowns, bright flared skirts, and extravagantly oversized dresses make up this collection. Each corset and bodice are fully boned, with the understructure as the real focus. With layers of tulle skirts to flare and spin and grand panniers with lace trim, what's under the dresses are as important as the outer dress itself. Ballgowns are how I learned to sew and are always a learning process and an evolving opportunity. I will only be satisfied when the skirts cannot fit through a doorway.</p>
Charlene Desjardin	<p><u>Elegant Endearment</u> Elegant Endearment is a collection of bridal gowns inspired by flowers and architecture. I designed these gowns for women who are seeking unique, stylish looks on their wedding day. Every bride wants to find a perfect dress that expresses who they are. Weddings are intimate, personal, and important to many women. It is my goal to make women feel elegant and beautiful on their day.</p>

<p>Savana Gutierrez</p>	<p><u><i>Serina</i></u> My collection is called Serina, it is a formal wear collection. It's made for high school students going to prom, homecoming, or any formal school dance. I chose the name Serina because I like the way it sounds, but I also like what it means. Serina means calm, serene, peaceful, and tranquil. That's how I want people to feel when they are wearing my collection, instead of stressed out. My style inspirations are Selena Gomez, Ariana Grande, Zayn Malik, Harry Styles, and Justin Bieber. I wanted to design formal wear that was unprecedented, formal wear that I've never seen before. I want the people wearing my clothes to not only look good, but to also feel good in what they're wearing. When you walk into the room all eyes will be on you.</p>
<p>Erick Lima</p>	<p><u><i>MONARCH</i></u> My "Butterfly" collection (MONARCH) aims to highlight the ephemeral and fragile nature, ie vulnerability of the human condition, that connects us with our environment and the nature around us. The inspiration for this collection is the metamorphosis of a caterpillar that radically transforms its body, eventually emerging as a butterfly. The collection will illustrate this metamorphosis, with each piece celebrating the beauty, magic and vulnerability at each stage.</p>
<p>Marissa Lynch</p>	<p><u><i>Petrichor</i></u> As our planet is threatened by climate change, it is my passion to use my love for nature in this conscious collection. This project unites organic forms found in nature with eco-friendly fabrics to protect the very inspiration of the collection. Each piece was designed to work with and enhance the shapes and movement of the body, rather than just cover it for the sake of modesty. Aesthetic influences come from the life and natural processes found in the deep forest. Petrichor is the smell produced when parched soil is met with the sweet relief of a long-awaited rainfall. I aim to encapsulate this feeling of satisfaction and pleasure within my collection.</p>
<p>Sarah McBrien</p>	<p><u><i>On The Run</i></u> My collection is designed for Beyonce's On The Run tour, which is inspired by Bonnie & Clyde. My collection tells a dangerous love story between two people. There is no perfect love story, but they will do anything for each other no matter if they are on the run. At the end of the day, it's them versus the world. This collection shows the powerful and rebellious side of Beyoncé to go with the theme of her tour through the use of embellishments, specialty fabrics, and color schemes. The color story of my collection represents power, aggression, love, elegance, protection, and purity.</p>

<p>Hannah Nesbitt</p>	<p><u><i>Fierce Honey</i></u> “Fierce Honey” is an inclusive series of sophisticated, unconventional silhouettes designed for the adventurous, yet grounded woman of any age. In this red carpet, dress collection, I reconstruct chapters of ruin into beautifully laced narratives that will occupy space and time.</p>
<p>Brittany Nyman</p>	<p><u><i>Sweetness</i></u> Brittany Nyman’s Spring/Summer 2021 senior collection entitled Sweetness dives into a modern take on the 1960s. Using bright colors and flowy silhouettes this collection exudes vibrance in every piece. Designed with the idea of being trendy and also unique. Each piece is designed to be versatile to the everyday needs of the wearer. The collection varies from an off the shoulder top with exaggerated sleeves and matching skirt that is business casual ready, to a color blocking jumpsuit that is ready for a night out with friends and even a luxurious dress with a jumpsuit underneath that would stun at any black-tie event. This collection is sure to bring a sense of confidence and radiance to anyone who wears it.</p>
<p>Jordan Petro</p>	<p><u><i>Modern Psychedelia</i></u> Modern Psychedelia is designed for the nostalgic, bold, and whimsical. This collection features 10 groovy ensembles; all made to enhance the female form by showing skin in all the right places. Looks 1 through 10 take you on a visual journey through 1960’s trends, starting with mod fashion and ending with psychedelic prints. This collection plays with unique silhouettes and color that lend perfectly to the Spring season. Fashion should be fun; Modern Psychedelia is a playful spin on historical dress.</p>
<p>Kayla Robinson</p>	<p><u><i>Modernized Old Hollywood</i></u> This collection pulls inspiration from my favorite points of the 20th century. The 1930s, the 1940s, and the 1950s. The silhouette and drama of the dresses from these times are something I have always been drawn to. With that in mind, I chose to design ensembles befitting the starlets of old. I wanted to incorporate a lot of the femininity that was seen, along with the drama that often walked the early red carpets. I also made to give everything a vintage feel, but keep a modern look.</p>

<p>Amy Westlund</p>	<p><u><i>Ethereal Dreams</i></u> Ethereal dreams is a Spring collection for the hopeless romantics and the dreamers. The ten designs embrace the delicate side of women, while playing with unique cutouts and bold shapes that enhance the female form. With soft, free-flowing silhouettes and a dreamy color story, these looks were designed to be delicate yet confident. The collection was inspired by a mystical forest of woodland fairies and pretty flowers, covered in a layer of mysterious fog. The whimsy of this inspiration, but under a modern, minimalist lens is what makes these looks fanciful yet realistic and wearable.</p>
<p>Mariah Yoder</p>	<p><u><i>Meet me in the garden</i></u> This collection is inspired by travel and nature. I imagine a group of friends getting dressed up for a garden tea party. I wanted to design a collection that was timeless and romantic.</p>

Fashion Design and Retailing Portfolio Day

Merchandising Students presenting business plans

FASH 464 Fashion Merchandising: Planning, Policies, and Implementation

(Capstone course)

An analysis of industry standards in a business plan for a model retail business. Concepts included are financial planning, store location, organizational structure, merchandise assortment, and financial structure of the apparel and home furnishings industries. The role of the buyers and managers in policy making is analyzed. Open-to-buy and pricing are calculated and evaluated. Procedures and techniques practiced in assortment, movement of goods, customer service, security, and store policies are reviewed.

Click on the titles below to view the presentations.

Student Business Plan Analyses by Groups <i>Sponsor: Virginia Noon</i>	
Group Members	Store Name and Description
Amanda Carrier Hailey Davis Angela Dube Kalia Pfeiffer	<p><u><i>The Cosmetic Project</i></u> The Cosmetic Project is a clean beauty makeup brand that aims to enhance one's natural beauty while being advocates for women-run/owned businesses. The Cosmetic Project stands out from other makeup companies due to the focus on female empowerment and its dedication to providing only the best products for skin everywhere. By using sustainable packaging, being a transparent brand, and helping women-run businesses in the community, The Cosmetic Project plans to be the next big thing in the cosmetic industry.</p>
Taylor Cloonan John Frasca Raven Grinstein	<p><u><i>Otium Athleisure</i></u> Otium Athleisure is an eco-friendly athleisure brand that inspires mindful and active women who practice wellness and sustainability throughout the community. The store is situated in Wellesley Square in downtown Wellesley, Massachusetts and aims to promote total mind and body wellness through its product assortment and in-store fitness events. As part of Otium Athleisure's commitment to a circular business model, the store will also act as a textile drop-off center for unwanted garments to be recycled. Otium's vision is to become a lifestyle retail brand which enhances consumers experience by incorporating a juice bar alongside the retail and community led classes.</p>

<p>Sheriden Costello Cheyenne McLeod Katelyne Murphy Angeles Ramos</p>	<p><u><i>Upcycle Obsessed</i></u> Upcycle Obsessed is a casual women’s clothing store located in the Seaport District of Boston, Massachusetts. The Seaport District has heavy foot traffic and is a great location for a startup company like Upcycle Obsessed. This specialty store sells clothing for both formal and informal occasions, products include tops, bottoms, dresses, and accessories. All of the products found in the store are sustainable so there is no harm being done to the environment. The owners plan to take unwanted or unworn clothing and refurbish it into a fresher and newer product that will appeal to the target market.</p>
<p>Ricardo Damas Katelyn DiMaggio Abbie Kurtzer Sydney Spunt</p>	<p><u><i>The Expressions Collective</i></u> The Expressions Collective is a sustainable curated thrift shop that sells one of a kind second hand, upcycled and vintage clothing, in Boston Massachusetts. The retail store is located in Allston, Massachusetts at 226 Harvard Ave. The brand offers a quality, hand-picked thrifted inventory to consumers of all genders, sizes, and races ranging from the ages of 18 to 38 years old. The Expressions Collective aims to provide a positive atmosphere for small businesses to rent space in the shop to sell handmade and ethically sourced products in one location. The company's mission is to offer sustainable clothing as well as incorporating the community's nearby vendors to promote and sell their products. The Expressions Collective is brand that hopes to encourage consumers to shop second hand while supporting local businesses.</p>
<p>Annie Debarros Maggie Destino Alexa Roche Nina Romano</p>	<p><u><i>Breathe Athletics</i></u> Breathe Athletics is luxury athletic wear reinvented; the brand that is most reliable for the strong athletic woman, as well as the most stylish athleisure for the everyday woman looking for comfort. Patented fabrics have been developed to assure its sweat proof and smell proof features, allowing the customer to be able to undergo a grueling workout and maintain the fact that her outfit does not show her sweat through the fabric or have an odor. Breathe Athletics is not just a clothing brand, but a community of women who strive to live a healthy lifestyle and demand athleisure wear that is reliable and on trend. The company vision is to create a movement and further motivate the women who already incorporate fitness in their life, while pushing new customers to value the role of fitness, even if that means in small ways.</p>

<p>Emily Ferris Miyah Gaston Lauren Kimura Sophie Lannon</p>	<p><u><i>Tierra Boutique</i></u> Tierra is a clothing boutique that offers mindfully manufactured and produced apparel for young women that want to support sustainability within the fashion industry while remaining on trend with popular culture. Tierra prides itself on achieving sustainability within multiple facets of the business. This includes the decor and design choices, materials for shipping and packaging, and fibers used for apparel. Tierra not only wants to be a positive contributor towards improving the impact that the fashion industry has on the planet but strives to empower women. This includes promoting body positivity and female empowerment through a wide range of sizing and in-store tailoring. Tierra is a company that offers on-trend apparel for women of all sizes. Inspiration for apparel design is gathered by analyzing popular culture. This includes celebrity styles, fashion runway shows, television, music, and movies. In the future, Tierra hopes to expand store locations as well as partner with various social media influencers to aid in spreading brand awareness and growth of the company.</p>
<p>Kianna Gainey Zuzu Luetje Nicole Maher Tianna Sebastian</p>	<p><u><i>Asuna Activewear</i></u> Asuna Activewear is a modern yoga apparel company that sells women’s athleisure targeting women from ages 17-35 years. Asuna is the seated posture used for meditation, from the Sanskrit meaning seat. Sanskrit is regarded as the ancient language in Hinduism, where it was used as a means of communication and dialogue by the Hindu Celestial Gods. The Asuna Active Wear store or company carries merchandise for the health-conscious, socially responsible-woman hoping to make a change in the world based on where she shops. The business plans to exclusively use sustainable fibers and fabrics when manufacturing its products. By using innovative and sustainable textiles Asuna will be able to raise awareness on sustainability through the products and values.</p>
<p>Milani Gumbs Gabriela Mendez-Acevedo Mariya Vitalien</p>	<p><u><i>The Curl Factory</i></u> The Curl Factory is an upcoming small business selling natural ingredient, cruelty free hair care products and accessories for men and women with textured hair. The company is owned by three Black and Latina woman Milani Gumbs, Gabriela Mendez-Acevedo, and Mariya Vitalien, who each have a different type of textured hair. The company is personal to the owners as the owners understand the experience and difficulties of learning to embrace natural and textured hair. This is why the company was created. The Curl Factory will be on 92 State Street, in Downtown Crossing, Boston, Massachusetts which is an urban diverse area in Downtown Boston. The company's mission is to redefine the art of hair care, and empower people to embrace their natural hair texture.</p>

Oral Student Presentations

Friday, May 7, 2021

12:30pm

[Click here to join Zoom session](#)

12:30pm

Collin Kelly, *Faculty Sponsor: George Locascio*

Making a Withdrawal: Does germination of a coastal endemic decrease over 25+ years of storage in a conservation seed bank?

12:45pm

Nunzio Rosselli, *Faculty Sponsor: Paul Galvin*

Tribalism: Our Innate Us versus Them bias

1:00pm

Luke Doherty, Jovan Rivera, and Garth Sharp, *Faculty Sponsor: Karen Druffel*

Data Privacy: Students' Perception of Privacy Online

Student Presentations Alphabetically by Major

Click on the student name to view their title and abstract.

Major	Student Name	Faculty Sponsor
Art Education	Michelle Haley	Erika Schneider
Art History	Alex LeBlanc Eric Qua	Erika Schneider Erika Schneider
Biochemistry	Justine Brown	Sarah Pilkenton
Biology	Valeria Alves Emma Bernier Natalie Cooney Collin Kelly Kyla Mucciarone Grace Pushor Nunzio Rosselli Amanda Stackpole Cheryl Thomas	George Locascio George Locascio Aviva Liebert George Locascio Aline Davis Richard Beckwitt Paul Galvin Richard Beckwitt Richard Beckwitt
Business and Information Technology	Vanessa Boulos Luke Doherty Mason Hollick Jovan Rivera Jacob Robbins Garth Sharp Daniel Vazquez	Karen Druffel Karen Druffel Karen Druffel Karen Druffel Karen Druffel Karen Druffel Karen Druffel
Business Management	Vee Alvarado Michael Compitiello Kevin DhePaganon Robert Doyle Christopher Flores Courtney Keery Kyle Sawtelle Julia Teixeira Anni Xie	Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri Erastus Ndinguri
Chemistry	Jared Hudson-Bryant	Argyroula Stamatopoulou
Chemistry and Environmental Science and Policy	Jessica Vinskus	Sarah Pilkenton

Major	Student Name	Faculty Sponsor
Criminology	Josh Berman	Xavier Guadalupe-Diaz
	Tianna Keaney	Xavier Guadalupe-Diaz
	Kyle Martin	Xavier Guadalupe-Diaz
	Issac Nascimento	Xavier Guadalupe-Diaz
	Ryan Sistrand	Xavier Guadalupe-Diaz
	Lordsley Sylvain	Xavier Guadalupe-Diaz
Fashion Design	Mariah Yoder	Seunghye Cho
Healthcare Administration (Graduate Program)	Daniel Ackom	Stephen Lemire
	Narosmi Auguste	Stephen Lemire
	Danise Benson	Stephen Lemire
	Jordan Bruso	Stephen Lemire
	Erin Cote	Stephen Lemire
	Palok Das	Stephen Lemire
	Isabela De Araujo	Stephen Lemire
	Sara Freedman	Stephen Lemire
	Lily Hannon	Stephen Lemire
	Luanne Hills	Stephen Lemire
	Gary Kersey	Stephen Lemire
	Erin McGrath	Stephen Lemire
	Cathleen Mendes	Stephen Lemire
Francine Murphy	Stephen Lemire	
Ralph Valliere	Stephen Lemire	
History	Samantha Frost	Maria Bollettino
Illustration	Sage Ray	Erika Schneider
Mathematics	Emma Gertje	Christopher Staniszewski
Nursing Education (Graduate Program)	Hannah Bosse	Kelly Fisher
	Caitlin Coveney	Kelly Fisher
	Tara Johnson	Kelly Fisher
	Adriana Levy	Kelly Fisher
Nursing Leadership (Graduate Program)	Lynn Barry	Kelly Fisher
	Deborah Bossey	Kelly Fisher
	Shelby Butwell	Kelly Fisher
	Joanne Cassell	Kelly Fisher
	Amy Edwards	Kelly Fisher
	AnneMarie Fleming	Kelly Fisher
	Christine Howe	Kelly Fisher
	Laura Moriarty	Kelly Fisher
	Kate Morse	Kelly Fisher
Lauren Van Luling	Kelly Fisher	

Major	Student Name	Faculty Sponsor
Psychology	<u>Abigail Adams</u>	Kimberly Arditte Hall
	<u>Samirah Antenor</u>	Kimberly Arditte Hall
	<u>Danaejah Buissereth</u>	Kimberly Arditte Hall
	<u>Eryca Carrier</u>	Aline Davis
	<u>Adriana Cogliandro-Vaughan</u>	Kimberly Arditte Hall
	<u>Jennifer Correa</u>	Deborah McMakin
	<u>Ivan Delacruz</u>	Kimberly Arditte Hall
	<u>Julia Dudek</u>	Kimberly Arditte Hall
	<u>Daniel Fuentes</u>	Kimberly Arditte Hall
	<u>Alana Gardner</u>	Kimberly Arditte Hall
	<u>Venessa Guerrero</u>	Deborah McMakin
	<u>Jacqueline Hill</u>	Deborah McMakin
	<u>Caetlin Johnson</u>	Kimberly Arditte Hall
	<u>Brian Kozek</u>	Deborah McMakin
	<u>Hannah Lima</u>	Kimberly Arditte Hall
	<u>Diana Marte</u>	Kimberly Arditte Hall
	<u>Vilmary Martinez</u>	Deborah McMakin
	<u>Knile McDowall</u>	Kimberly Arditte Hall
	<u>Kelsey Milinazzo</u>	Kimberly Arditte Hall
	<u>Julianne Mola</u>	Deborah McMakin
	<u>Autumn Nisby</u>	Kimberly Arditte Hall
	<u>Kaylin Patterson-Soar</u>	Kimberly Arditte Hall
	<u>Sara Price</u>	Deborah McMakin
	<u>Sarah Rullie</u>	Kimberly Arditte Hall
	<u>Jacquelynn Schwalm</u>	Kimberly Arditte Hall
	<u>Elizabeth Siok</u>	Kimberly Arditte Hall
<u>Kyle Smith</u>	Kimberly Arditte Hall	
<u>Gabby Synk</u>	Deborah McMakin	
<u>Zariah Thompson</u>	Kimberly Arditte Hall	
Sociology	<u>Natasha De Leon</u>	Xavier Guadalupe-Diaz
	<u>Kathyuska Gaitan</u>	Xavier Guadalupe-Diaz
	<u>Gabriela Harmon</u>	Xavier Guadalupe-Diaz
	<u>Abigail Salvucci</u>	Lina Rincón
	<u>Melikke Van Alstyne</u>	Xavier Guadalupe-Diaz
Studio Art	<u>John Paul Blanchette</u>	Erika Schneider
	<u>Haley Donahue</u>	Erika Schneider
	<u>Daniele Farias de Pontes</u>	Erika Schneider
	<u>Jennifer Hensel</u>	Erika Schneider
	<u>Erin Kapurch</u>	Erika Schneider
	<u>Sayana Medina-Carrasco</u>	Erika Schneider
	<u>Danielle Ray</u>	Erika Schneider
<u>Lee Seaman</u>	Erika Schneider	

Titles and Abstracts

Click on the titles below to view the presentations.

Art Education

Michelle Haley

Faculty Sponsor: Erika Schneider

[Kimsooja](#)

Kimsooja, a south Korean based sculptor explores the circumstances of humanity and engages in the problems of aesthetics, culture and politics of our time including the transcendence of the idea of the individual. Thorough film she explores the idea of a needle intertwining the world as represented by the symbols of making fabrics, overall making herself a “needle person” by having others walk past her intertwining lives. Not only does Kimsooja increase inclusivity in the art business and education, she also encompasses the soul of art through her cultural understandings, personal experience and should absolutely be included in contemporary art history.

Art History

Alex LeBlanc

Faculty Sponsor: Erika Schneider

[Chitra Ganesh and LGBT+ mythological themes](#)

Chitra Ganesh is an Indian American artist inspired by Bollywood posters and uses her work to create narratives for LGBT+ people and to talk about politics regarding feminism and to make the viewer question current society's downfalls with these minority communities. She does this while using different styles like surrealism and expressionism, while using multiple mediums and compositions. With familiar styles like comic and mixed media pieces, she brings topics like feminism and sexuality to light for the viewers. Regarding feminism art, Ganesh should be in the dialogue of women artists that should be commended, for the way she presents these issues within society.

Eric Qua

Faculty Sponsor: Erika Schneider

[Video Art: The Yonemoto Brothers](#)

The Japanese American brothers, Norman and Bruce Yonemoto, each successful mixed media artists in their own right, collaborated numerous times throughout their careers. The end results are short films that utilize popular Hollywood tropes to create dreamlike short films reflecting on themes of gender and sexual identity, politics, and what it means to be American.

Biochemistry

Justine Brown

Faculty Sponsor: Sarah Pilkenton

[Phenolic Phytochemicals in Dandelion and Dandelion Teas](#)

Dandelion (*Taraxacum officinale*) has been used in traditional medicine in Europe and Asia, and there is current interest in its medicinal properties. Traditionally, the plant has been used to treat dermatological conditions such as acne, warts, rashes, eczema, and dermatitis. Of particular interest are the phenolic phytochemicals in dandelion. These phytochemicals include gallic acid, chlorogenic acid, vanillic acid, caffeic acid, syringic acid, 4-coumaric acid, ferulic acid, trans-

cinnamic acid, rutin, quercetin, and chicoric acid. The focus of this study is the determination of the phenolic profile of both water and ethanol extracts of commercially available dandelion teas and the roots and leaves of dandelion harvested on campus using HPLC.

Biology

Valeria Alves and Emma Bernier

Faculty Sponsor: George Locascio

[Water soluble chemical components derived from burning common New England vegetation](#)

Smoke produced from biomass combustion is an important ecological process. The chemical components that are produced are important to identify and quantify for a multitude of reasons. Smoke is important ecologically that stimulates seed germination in some species. Also, identifying the amount of particulate matter (PM) and other pollutants present in smoke are important to understand because of their effects on human health. When different species of plants burn, the smoke varies in quantities of many different unique compounds. To date, most studies have evaluated the chemical components of smoke from the fire prone habitats of Western North America, Australian, and South Africa. Our study examined native and nonnative plants found in the fire prone habitats of Northeastern North America. We evaluated the presence and amount of levoglucosan, an indicator of biomass burning and strigolactones, a plant hormone important for symbiotic relationships in the soil environment. We burned 7 individual plant species and 1 native plant mix using a bee-smoker and collected their smoke in distilled water. Once the water soluble compounds were collected, they were analyzed using High Powered Liquid Chromatography, UV and Mass Spectroscopy. We compared the collected smokes to a control of distilled water. Our findings from HPLC UV suggest that all of these species have extremely complex smoke products and more analysis needs to be completed. However, we did find similarities in the absorbance spectrum with the 4 woody species. This potentially suggests similarities among plant growth habits. This is important because the plants used in the experiment are from the globally rare ecosystem, the pitch pine-scrub oak barrens found in Northeastern North America. Furthermore, the Northeastern U.S. has one of the highest human population densities in the continuous U.S. The ability to predict the quantities of strigolactones and levoglucosan produced from each vegetation type is important ecologically for the rare plants found within these habitats, and the ability to predict the quantity of biomass burning during a fire event is important for human respiratory health.

Collaborators – Dr. William Beavers (Vanderbilt University)

Natalie Cooney

Faculty Sponsor: Aviva Liebert

[Passive pollen carrying differences between male and female *Bombus impatiens* on *Solidago*](#)

Male bumble bees are generally less studied than their female counterparts in many ecological contexts, especially regarding pollination. One of the most prevalent bumble bees found in the New England region is *Bombus impatiens*, better known as the Common Eastern Bumble Bee. While the pollination habits of female *B. impatiens* have been more intensely studied over time, there is little data available regarding if male *B. impatiens* engage in pollination or how much pollen they may be moving. Research on other species of bees has shown that in the presence of males successful pollination of host plants by female bees becomes more likely. As *B. impatiens* is an important pollinator for the New England region having a better understanding of the males' ability to carry pollen could help us gain a more complete picture of the whole species contributions to the environment. To gain a baseline awareness of the potential pollination power of male *B. Impatiens*, I compared pollen loads of males and females that I collected from three locations across eastern and north central Massachusetts. I measured the size of each bee, and then washed the pollen load off to be analyzed. Pollen cells from individual bees were counted utilizing a hemocytometer and then

compared to other bees of their size and sex. After analysis of the pollen samples there was no correlation between bee size and pollen load, as well as no correlation between bee sex and pollen load. These results suggest that male *B impatiens* can carry as much pollen on their bodies as female *B impatiens*.

Collin Kelly

Faculty Sponsor: George Locascio

Making a Withdrawal: Does germination of a coastal endemic decrease over 25+ years of storage in a conservation seed bank?

[Click here to join Zoom session at 12:30 on Friday, May 7, 2021 to view live presentation](#)

Sandplain agalinis (*Agalinis acuta*) is a rare plant found in the fire prone habitat of the grassland and heathlands of Eastern North America. Since 1989, *A. acuta* seeds have been collected from several different populations in four different states and stored in the New England Plant Conservation Program seed bank. One study completed in the late 1980s found that *A. acuta* seeds when kept at -15°C had a reduction in viability when sown just after 2 years. Since then, protocols have been honed to preserve seeds for a longer time period. Understanding the rate of viability loss for rare seeds stored in seed banks with a different temperature and humidity regime is important for plant conservation. Using germination trials, we assayed the viability of *A. acuta* seeds collected over 26 years in Connecticut, Massachusetts, and Rhode Island and stored in sealed foil packets at -18°C. Our findings suggest that *Agalinis acuta* seeds do not lose viability predictably over time under seed bank conditions. Our results suggest that the seeds of the rare *Agalinis acuta* can be stored at -18°C for at least 26 years while maintaining high viability. This information will help seed banks make decisions when it comes to the collection storage for rare plant species seeds like *Agalinis acuta*.

Kyla Mucciarone

Faculty Sponsor: Aline Davis

A review of Medicinal Cannabis on the neurological system

Medicinal Cannabis, also known as medical marijuana has been a topic of controversy over the years. When it was first discovered it was very popular for treating many issues, however, the psychedelic effects caused laws to be placed making it illegal for use. It has slowly increased in popularity as a form of alternative medicine, helping patients when prescription medications have not been able to. Neurological disorders have been an area of interest for medicinal cannabis treatment. Much of what is understood about medicinal Cannabis is still unknown as the interactions between the body and Cannabis are very complex.

In this review, a multitude of different neurological conditions are covered as well as the impact of medicinal Cannabis on these issues. Relevant studies are evaluated regarding the impact of medicinal Cannabis as a treatment. The endocannabinoid system is discussed as is its modification by exogenous cannabinoids. This review will also highlight some of the issues that come about during scientific studies examining Cannabis. The influence of the COVID-19 pandemic on the usage of medicinal Cannabis will also be discussed. Lastly, this study will also discuss how the United States of America's government has restricted the proliferation of Medicinal Cannabis studies and research due to federal law.

Grace Pushor and Amanda Stackpole

Faculty Sponsor: Richard Beckwitt

How New England White-Tailed Deer (*Odocoileus virginianus*) compare to the rest of the North American White-Tailed Deer population

White Tailed Deer (*Odocoileus virginianus*) are found all over North America except the southwestern United States and Northern Canada. The first presence of deer was pre-Ice in the

Pliocene era, about 4 million years ago. After the Ice Age, the genus *Odocoileus* was the only deer genus in North America. There are now two species, one being the White-Tailed deer. As the glaciers retreated post-Ice Age, the White-Tailed Deer population migrated northward from refuges in the southeastern United States into most of North America, including New England. In our study we looked at mitochondrial sequences of White-Tailed deer individuals from New England and observed how these sequences compared to those of other geographic locations in North America. We observed that conservation efforts and the use of translocations has contributed to this DNA similarity. By obtaining sequence from GenBank from studies done in central Canada and the southeastern United States, then comparing them to each other and to New England using the computer programs MegaX, dnaSP, and GenALEx, we were able to note the similarities between different individuals from different geographic locations. Our results showed that individuals from deer populations in Michigan and Canada were more closely related to each other, while the individuals from the populations in New England were more closely related to those of the southeastern United States. We identified 10 haplotypes from 27 sequences from New England. The genetic diversity of the deer in New England was concluded to be comparable to populations in other parts of North America (haplotype diversity (H_d)-0.863 and nucleotide diversity (P_i)=0.048).

Nunzio Rosselli

Faculty Sponsor: Paul Galvin

Tribalism: Our Innate Us versus Them bias

[Click here to join Zoom session at 12:30 on Friday, May 7, 2021 to view live presentation](#)

Humans are the product of hyper cohesive, hyper loyal, group forming ancestors, whose genes survived partly because of these traits. While this was an advantage in the plains of Africa hundreds of thousands if not millions of years ago, how does it affect our modern society?

Cheryl Thomas

Faculty Sponsor: Richard Beckwitt

The Origin of White Tailed Deer on Nantucket Island

The deer on Nantucket Island were hunted entirely in the early 1900's. According to local history, a single buck was brought over by fishermen when it was found swimming near the island. Two does from Michigan were brought to the island in the mid 1920's. In the 1930's three does and two bucks were transported from New Hampshire to Nantucket. These deer were thought to have founded today's population. In this study, we have investigated the relatedness of the white-tailed *Odocoileus virginianus* deer between Nantucket Island and populations in the US including MI, New England, MA Mainland, and Long Island NY. To do this, we compared individual nucleotide sequences between and within these populations using the computer programs MEGAX, GenALEx on Excel, and DNAsp. The haplotype diversity of the deer on Nantucket was 0.42602, which was less than all the other populations. The nucleotide diversity of the Nantucket deer was $P_i = 0.01894$, which was also a smaller value compared to other populations. We also constructed phylogenetic trees to compare the relatedness of each individual population. With this, we were able to determine that Nantucket deer resemble populations from Michigan. The low genetic diversity of the deer on Nantucket is indicative that the population was founded by a small number of individuals. Future research could include the evaluation of new samples collected from deer in New Hampshire, if possible.

Business and Information Technology

Vanessa Boulos and Daniel Vazquez

Faculty Sponsor: Karen Druffel

[The Many Ups and Downs of Cloud Computing](#)

The use of cloud computing has grown to be more popular especially now that businesses and people are working from home. It is also commonly used for personal use and allows users to easily access data files. Some examples of cloud computing providers include Microsoft, Google Drive, Dropbox, and iCloud. Within this research paper, the main focus will be; How do people use cloud computing and what kind of information do they save? Some elements that will be looked at relate to trust, privacy, and how reliable cloud computing is. Another topic that will be spoken about is cloud security and measures that have been put in place to protect the information in a server. By using the research method of online surveying, the different elements as spoken about prior, will be assessed to see how people manage cloud computing on a day-to-day basis. The population of the survey is faculty and students at Framingham State University located in Framingham, Massachusetts. The participants are individuals of different age, gender, and race within the spring semester of 2021. The survey was distributed through an unbiased method of sending it electronically through Qualtrics to students and faculty to get the best results.

Luke Doherty, Jovan Rivera, and Garth Sharp

Faculty Sponsor: Karen Druffel

[Data Privacy: Students' Perception of Privacy Online](#)

[Click here to join Zoom session at 12:30 on Friday, May 7, 2021 to view live presentation](#)

The purpose of this study is to add to the current research regarding data privacy with respect to college students and their perception of privacy in the digital world and the rising threats to consumer data. This study combined data from multiple peer reviewed resources, and surveyed students from Framingham State University. This study will review the perception of students' understanding of who they believe is responsible for protecting consumer data, how students interact with technology, and how they use their personal information online. Furthermore, we surveyed student's knowledge regarding their rights online and how they see Government's role in passing regulations on social media platforms and other big tech companies.

Mason Hollick and Jacob Robbins

Faculty Sponsor: Karen Druffel

[Do Students Trust Campus Provided Cloud Services?](#)

In our survey that we have conducted, it shows the amount of trust that campus students have with their universities cloud provided software. We also will be receiving information about their knowledge of cloud based software and other ways to stay secure while using a computer.

Business Management

Vee Alvarado

Faculty Sponsor: Erastus Ndinguri

[Leadership Application Project](#)

A special guest that was interviewed, telling us about their experience in how they played a role of leadership.

Michael Compitiello

Faculty Sponsor: Erastus Ndinguri

[Leadership Through Intuition: Seeing What's Not Visible](#)

The Leadership Application Project I will be presenting is an analysis from an interview with a former commander I served under during my tenure in the military. The gentleman in this interview had such a profound impact on what I believe true leadership should be, I ended up molding my leadership style from his example. What he taught me was how a great leader should know his people and be able to see what is unseen. It is my goal through this presentation, to share with you my discoveries and help you better understand someone whom I consider a great leader.

Kevin DhePaganon

Faculty Sponsor: Erastus Ndinguri

[Leadership Application Project](#)

Analysis of an interview with Sirano DhePaganon, PhD, Director and Senior Scientist, Longwood Center for Structural & Chemical Biology at Dana-Farber Cancer Institute.

Robert Doyle

Faculty Sponsor: Erastus Ndinguri

[MSG Saulnier-Combat Escorts/Patrols on MSR Tampa](#)

While assigned as a mission commander for over the road escorts and patrols in Iraq, MSG Saulnier must apply Army leadership skills while under fire outside the wire to ensure mission success, intel collection and always placing the safety of warriors under his command above his own.

Christopher Flores

Faculty Sponsor: Erastus Ndinguri

[Christopher Flores Interview](#)

I will be interviewing an entrepreneur.

Courtney Keery

Faculty Sponsor: Erastus Ndinguri

[Leadership](#)

Interview from a leader of today's everyday work life.

Kyle Sawtelle

Faculty Sponsor: Erastus Ndinguri

[Lindsey Sawtelle: Global Medical Affairs Operations Manager](#)

Lindsey Sawtelle, my sister, is a global medical affairs operations manager at GSK. She is responsible for gathering insights to forecast budget, drug supply and KPIs, tracking metrics, and managing the transition from study approval to operations set up, activation, and patient enrollment.

Julia Teixeira

Faculty Sponsor: Erastus Ndinguri

[Leadership Application Project](#)

This project consists of an interview done by me. I will be speaking to a leader in my life and asking them questions, then I will be analyzing their leadership styles and connecting their styles to those of our class textbook as well as my own.

Anni Xie

Faculty Sponsor: Erastus Ndinguri

[Dr. James Cressey](#)

This is a presentation on a faculty member in Framingham State University. His name is Dr. James Cressey, and I will be presenting about when he came to his role as the coordinator of the Chris Walsh Center.

Chemistry

Jared Hudson-Bryant

Faculty Sponsor: Argyroula Stamatopoulou

[Comparative Protein Modeling and COVID-19](#)

With how suddenly the world was hit by the COVID-19 pandemic, it is becoming more important than ever that researchers can react to the presence of new viruses as efficiently as possible, as to counteract such poor preparations. Comparative protein modeling, as the name suggests, uses known protein structures, often determined by experimentation, to predict the models of unknown protein structures with similar amino acid sequences. This method works because changes to the amino acids of a protein changes the 3-dimensional conformation of the protein, as well as how it functions. This method of modeling sacrifices the quality of experimentation for speed. This speed might become necessary for the quickest prediction of virus structures in the near future. It is to this end that I wished to see what the results would be in using past coronaviruses to predict the model for the SARS-CoV-2, or more commonly called COVID-19, and more specifically its spike protein, using comparative modeling software. This is also being expanded to the multitude of COVID-19 mutations because mutations altering the amino acids of virus proteins would also alter its 3d conformation, how it functions, and how effectively vaccines combat it, as we're starting to see right now in America. By comparing these results to experimental results, I hope to show how improvement of protein modeling software in general is vital to the future of virus research.

Chemistry and Environmental Science and Policy

Jessica Vinskus

Faculty Sponsor: Sarah Pilkenton

[The Analysis of Imidacloprid in Water and Soil Samples Using HPLC](#)

Neonicotinoids are a family of chemicals commonly used in pesticides to target leaf eating insects. Abundant research has shown that they negatively impact bees' health and productivity. Imidacloprid is one of the more popular neonicotinoids, and its widespread usage presents a danger to bee health. This study determines and evaluates a protocol using high performance liquid chromatography (HPLC) with diode array detection (DAD) for quantifying the concentration of imidacloprid. This study tests field water samples using the developed protocol to determine the level of contamination in the natural bodies of water in Massachusetts. The protocol was also used to conduct analysis on sorption isotherms for two standard soils from the International Humic Substances Society: Pahokee peat soil (PP) and Elliot silt loam soil (ESL).

Criminology

Josh Berman, Lordsley Sylvain, and Ryan Sistrand

Faculty Sponsor: Xavier Guadalupe-Diaz

[Gambling in America: A study on Problem Gambling behavior using the socio-ecological model](#)

In recent years gambling has been legalized in new forms in states across America. As the gaming industry becomes less regulated and more popular we are interested in studying what factors impact problem gambling behavior. This study will analyze factors that can cause problem

gambling behavior using scholarly articles from the Framingham State University library database. In our research we used surveys conducted by the National Opinion Research Center at the University of Chicago. Using this codebook allowed us to gather indicators of problem gambling behaviors and indicators of what may influence problem gambling. By using the socio-ecological model we can analyze these factors that may lead to problem gambling behavior on an individual level, relationship level, community level, and societal level. Using this model allows us to look at the issue of problem gambling with a wide lens in an attempt to contribute further understanding towards problem gambling behavior. We expect to find that males and individuals from lower income areas have a higher risk to engage in problem gambling behaviors. These results can help better understand and prevent the issue as gambling comes more accessible to Americans.

Gabriela Harmon, Tianna Keaney, Kyle Martin, and Issac Nascimento

Faculty Sponsor: Xavier Guadalupe-Diaz

[***A study on the environmental factors that influence drug use***](#)

Drug Use: What environmental factors influence drug use?

Fashion Design

Mariah Yoder

Faculty Sponsor: Seunghye Cho

[***Can the fashion industry use child work ethically?***](#)

This study investigates the current status of child workers focused on social factors in the fashion industry by analyzing current work environments and exploring the ways to regulate child work in the production of clothing. Consumers are now, more than ever, concerned with who made their clothes and how the people who made them were treated. A survey in 2019 found that 47% of internet users worldwide had ditched their products and services from a brand that violated their personal values with protecting the environment at the top of that list (Rosmarin). In this study, the investigator will distinguish child work from child labor; the former does not directly impede on the child's health or education whilst the latter does. This research showed the current status of child workers is a smaller number compared to children involved with child labor. With the findings, the investigator will explore a possible implementation of a program for two specific fashion brands that incorporates a collection relating to child work. The program will include branding and marketing that educates consumers on child work and how it could enrich the child's lives and minimize the number of children working in harmful child labor situations. It will also include educational opportunities for the children working which would be another reason consumers would be interested in purchasing.

Healthcare Administration – Graduate Program

Daniel Ackom

Faculty Sponsor: Stephen Lemire

[***Medication error and implementation of barcode scanner in Ghana Health service***](#)

Patient safety and quality of care are a priority for the healthcare sector worldwide. The main objectives of this study is to determine the preparatory needs for introducing a Barcode Medication Administration System (BCMA) and to identify, categorize, and prioritize the main criteria for a successful implementation of this technology in healthcare facilities. especially in Ghana Health Service

Narosmi Auguste

Faculty Sponsor: Stephen Lemire

[How Telehealth is being Managed Post-Covid](#)

What is Telehealth? Telehealth is a combination of telehealth, telecommunication, and telemedicine. It is the remote contact communication or long-distance transmission between clinicians and patients and between providers and clinicians. It encompasses a variety of clinics that include education, clinical advice, diagnosis, reminders for patients, intervention, monitoring, remote admissions, and many more. As an added bonus, it includes remote learning with providers and practitioners. Telehealth aids with underserved populations that would otherwise be missed in health services and it is currently helping to solve issues around the COVID-19 pandemic that has evolved worldwide.

Danise Benson

Faculty Sponsor: Stephen Lemire

[Improving Patient Experience in Two-Risk Prone Communication Areas: Medication Communication and Discharge](#)

Improve on the reduction of patient readmissions by improving patient experience

Jordan Bruso

Faculty Sponsor: Stephen Lemire

[Barriers in Healthcare for Seniors](#)

Technology has become a fundamental tool in most industries, especially healthcare. Today, technology is heavily relied on to store patient information, collect health data, and even assist with healthcare operations and procedures. With technology advancing at such a rapid rate, there are growing concerns for the cost of technology adoption, training technology literacy, security and much more. A major issue that has been tremendously evident throughout the COVID-19 Pandemics is the access to healthcare services and platforms that solely depend on technology. As COVID-19 Vaccination plans began rolling out end of 2020 and early 2021, seniors across the world are experiencing additional barriers to receiving the COVID-19 Vaccine due to technological dependencies. This barrier to vaccine appointment registrations has become a growing concern for this high-risk population. As communities continue to roll out vaccination eligibility for categorized population sub-groups.

Throughout the COVID-19 Pandemic, social determinants of health and high-risk populations have shown to be greatly burdened by the insidious virus. Whether this is related to socio-economic status, underlying health conditions or other social pre-dispositions, COVID-19 has affected those most vulnerable. Targeting health inequities across the Commonwealth is necessary to educate and empower underserved communities to slow the spread and eventually eradicate the virus. As COVID-19 Vaccinations become available across the United States, many states have devised timelines to prioritize those at greatest risk of contracting and/or spreading the virus. In Massachusetts, Phase 2 of the State's vaccination timeline began February 1st, 2021, prioritizing residents age 75 or older. Vaccines for COVID-19 have been authorized by the FDA for emergency use, to end the pandemic. With emergency authorization, the State of Massachusetts has allowed for various online clinic management & appointment scheduling systems to promote interoperability between vaccination administrator sites and the Massachusetts Immunization Information System. Specific to the senior populations, there is a technological literacy gap, created a barrier for eligible seniors to search, book and get vaccinated. There are many other health disparities associated with these online systems that may hinder vulnerable or minority population groups from getting vaccinated. There is a need to identify disadvantages and obstacles these subgroup populations face as the vaccine becomes available.

Erin Cote

Faculty Sponsor: Stephen Lemire

[Paying for Gene Therapy – A Social Dilemma Facing a World of Rapid Innovation](#)

Gene therapy treatments are usually one dose and are extremely expensive, typically over a million dollars. It begs the question; How are patients and payers going to pay for these treatments as they become more available? It was not until last year that the Center for Medicare Services (CMS) finalized a proposal, going into effect later in 2021, to create a new Medicare Severity Diagnosis-related Group (DRG) for chimeric antigen receptor T-cell therapy (CAR-T), a type of gene therapy. This unique reimbursement model was based on whether the product worked. In other words, the CMS finally came up with a payment model that is not fee-for-service for these high cost gene therapy treatments, but rather a pay schedule gated on the effectiveness of the drug post-op. But this new DRG specific to CAR-T will not cover or be appropriate for all diseases, treatments and patients in the future. Society at large will need to figure out how these more readily available treatments and cures are going to be paid for and who will have access to them. In an already complex global healthcare system, innovators creating these drugs are adding another layer of complexity, and time to come together and figure out how to pay for these life-saving medicines is running out.

Palok Das

Faculty Sponsor: Stephen Lemire

[Insights and Recommendations on Improving the Incident Reporting System \(IRS\)](#)

In the healthcare space, one of the principal strategies used by organizations to reduce avoidable patient harm or medical errors is through the appropriate implementation of incident reporting system (IRS). IRS is a method to obtain alert signals pertaining to the provision of patient safety and healthcare quality. It is a valuable tool for the physicians/ providers, patients, policy makers, as it provides them critical information pertaining to patient safety, helps in strengthening accountability, adds to organizational learning & development. Despite the growing need and importance of IRS, it is yet to be used to its optimal potential.

My research was carried out at the Milford Regional Medical Center, Massachusetts through survey questionnaires with an aim to get insights to my research questions, to thereby help in designing recommendations for making improvement in the Incident Reporting System.

Isabela De Araujo

Faculty Sponsor: Stephen Lemire

[Correlation between Quality Improvement Strategies and Reduction in High-Alert Medication Errors: Literature Review](#)

A medication error is defined as any preventable event that leads to inadequate medication or patient harm, at any stage of the drug treatment process, and is considered a frequent problem, that can occur due to many different reasons. Worldwide, the cost associated with medication errors can reach US\$ 42 billion annually. Nationally, these errors can cost up to \$17 billion annually. High-alert medications bear a heightened risk of causing substantial harm to individuals when they are used in error. Although there are 19 categories, the current literature review focuses on the ones that represent the greatest harm, and thus the greatest opportunity for improvement – opioids and insulin. By knowing the correlation between the use of quality improvement (QI) strategies and reduction in opioid and insulin-related medication errors, it is possible to define the most efficient and effective QI strategies, and select the ones that can, eventually, be deployed in other hospitals around the world.

Sara Freedman

Faculty Sponsor: Stephen Lemire

[Improving wait times for pediatric brain tumor patients to receive proton radiation treatment at Massachusetts General Hospital](#)

Pediatric brain tumor patients at Massachusetts General Hospital often have to wait to start radiation therapy due to limited spots on the proton beam machines after their brain tumor resections. It is critical for pediatric patients to receive proton therapy within a certain amount of days in order for treatment to be more effective. Proton beam therapy is different than traditional photon radiation therapy because proton therapy only targets unhealthy tissue which is important for a child's developing brain and will not damage healthy brain tissue. Data was gathered on patients tumor resections and their start dates of treatments to observe the amount of days they have exceeded from their ideal start dates. From analyzing the data, it can be shown to the administration in the department that pediatric patients are not obtaining their ideal treatment start dates and justify different scheduling solutions.

Lily Hannon

Faculty Sponsor: Stephen Lemire

[Navigating the Challenges of Covid-19 Vaccine Scheduling](#)

The Covid-19 vaccine roll out at Boston Children's Hospital presented an opportunity to research appointment scheduling. Scheduling is a major area of healthcare and one that can present many barriers to care for patients. The purpose of this project was to schedule patients for their vaccine while breaking down barriers that would interfere with the patient being able to schedule an appointment and in some cases physically make it to the appointment. The goal was to vaccinate all of our eligible patients that would like to receive the vaccine.

Luanne Hills

Faculty Sponsor: Stephen Lemire

[Pressure Injury \(PI\) Prevention in the Intensive Care Unit \(ICU\): An Interprofessional Collaborative Practice Approach](#)

At one academic medical center in central Massachusetts, there has been a significant increase in Hospital Acquired Pressure Injuries in the Medical Intensive Care Units related to the critically ill COVID-19 positive patients who require the use of multiple medical devices, often in conjunction with prone positioning therapy. This correlates with an overall increase in pressure injuries across the organization. Since a recent cost model estimates that pressure injuries can add \$26.8 billion annually to U.S. healthcare costs and directly impact patient outcomes, pressure injury prevention and reducing pressure injuries is extremely important to the organization. The approach to this problem has a primary focus on interprofessional collaborative practice for use of medical devices, with and without prone positioning therapy in multiple patient populations, including COVID-19 positive patients. Since interdisciplinary communication and teamwork are essential for pressure injury prevention, this quality improvement project is focusing on implementing standard/best clinical practices and improving interprofessional communication and collaboration. This includes increasing education and awareness, identifying trends, and implementing corrective actions with ongoing monitoring and adjusting. Our ultimate goal is to develop and implement a sustainable interprofessional pressure injury prevention program across the medical center. This project is concentrating on three medical ICUs and is addressing an interdisciplinary administrative-clinical approach to this problem. The methodology applied includes direct observation of bedside nurses and respiratory therapists. The observers first assessed baseline pressure injury prevention knowledge and practice utilizing an interdisciplinary rounding tool that was developed internally to assess the following: 1) offloading of medical devices; 2) correct application of securement devices; 3) following the wound specialist recommendations when a wound consult had been placed for presence of skin issues. The observers provided real time education and feedback at the point of

care during this first phase. During the second phase, the observers provided additional education and training for the bedside clinicians that focused on pressure injury prevention, medical devices, prone positioning therapy, and the importance of ongoing communication and collaboration. The final phase included weekly rounding to observe the same bedside practices (post education), identify trends, and provide real time feedback across the three medical ICUs. The anticipated outcomes include increased awareness and improvement in pressure injury prevention bedside practice, ultimately leading to a reduction in hospital acquired pressure injuries associated with the use of medical devices.

Gary Kersey

Faculty Sponsor: Stephen Lemire

[The emergence of portal health applications within the hospital setting at Boston Children's Hospital](#)

In this presentation I will focus on the emergence of portal applications related to patient access (health records, messaging, appointment scheduling, screening questions, and forms) and how it influences healthcare hospital operations during COVID. Using data and reports, an analysis will be presented on the impact within the hospital and the Department of Dentistry in particular. At the end, I will propose recommendations for improved workflows and deliveries that could be implemented onto the portal application.

Erin McGrath

Faculty Sponsor: Stephen Lemire

[Healthcare inequalities in the State of Massachusetts](#)

Healthcare inequalities in the State of Massachusetts

Cathleen Mendes

Faculty Sponsor: Stephen Lemire

[Incident Reporting and COVID-19's Impact](#)

Due to COVID-19 work center trends in safety incidents have increased in various ways. Throughout my internship at "New England Imaging Experts" I have collected data from pre COVID-19 and COVID-19 incident reports over a two-month span to address current trends over the 48 facilities throughout the New England area. Patient safety is the priority across the board and although we can say not every incident is always reported, we can continue to promote and improve the open communication of reporting incidents so that we are able to identify trends and improve preventative and procedural measures that will ultimately improve patient safety. The research completed was done to answer the question if incident reporting improves patient safety and how can we take that information to make active improvements.

Francine Murphy

Faculty Sponsor: Stephen Lemire

[Factors which Influence Implementation and Success of Health Information Exchange](#)

Strategies of implementing health information exchange

Ralph Valliere

Faculty Sponsor: Stephen Lemire

[Awareness of Medical Laboratory Science Profession](#)

There is a dire need for people to enter the field of Medical Laboratory Science as it is becoming more difficult to find qualified employees to fill vacancies in hospitals and other healthcare settings. bringing awareness to the field is probably the very first approach to start addressing the crisis.

History

Samantha Frost

Faculty Sponsor: Maria Bollettino

["Not all the Gems that sparkle in the Mine, Can make the Fair with so much Lustre shine": The Gendered Implications of Homespun during the American Revolution](#)

The growing body of literature concerning the production and consumption of homespun textiles during the American Revolution includes analyses of the political and cultural contributions of men and women to the homespun movement. This paper rejects these either/or analyses and instead contends that men were also able to participate in the movement on a cultural level, while women were able to participate on a political and even diplomatic level. Primary source analysis reveals that men not only partook in the homespun movement on a political level through their efforts to promote manufacturing in the new nation, but so too did they publicly don homespun to promote the labors of their female counterparts. Women participated within the movement by creating homespun garments to clothe their families and communities, but also published poems and broadsides that encouraged fellow women to wear homespun in order to reject English imports and support domestic manufacturing. Additionally, some women sent homespun silks to the French monarchy in order to promote the Franco-American alliance during the war. The homespun movement was a cultural endeavor that engendered a new national identity while simultaneously shifting the economy towards domestic manufacturing; such a nuanced phenomenon was necessitated by cultural, political, and economic factors, and required the labors of men and women to ensure its success.

Illustration

Sage Ray

Faculty Sponsor: Erika Schneider

[Salman Toor](#)

Salman Toor was born in Lahore, Pakistan in 1983. He studied drawing and painting at Ohio Wesleyan University and received his MFA from Pratt Institute. Toor uses his art to express many different messages that cover homosexuality and the lives of his fictional characters through his paintings. These paintings tell a story for these characters that seem to hold a relatable experiences from the artist that make them all the more intriguing and give the viewers a chance to express their feeling about the subject matter. His work is very expressive in terms of subject matter and the feelings it can bring out of viewers of this work. The artist is able to use techniques from previous art movements like Impressionism, Baroque, Rococo, and etc. into his work and expand the characteristics of contemporary art.

Mathematics

Emma Gertje

Faculty Sponsor: Chris Staniszewski

[Exploration of Filled Julia Sets in Non-Autonomous Iteration](#)

In classical complex dynamics, one considers the iteration of a single polynomial or rational function. In non-autonomous iteration, one considers the composition of arbitrary polynomials with suitably bounded degrees and coefficients. Here, we explore the behavior of certain sequences of quadratic polynomials. In particular, we describe properties of the filled Julia sets of these sequences.

Nursing Education – Graduate Program

Hannah Bosse

Faculty Sponsor: Kelly Fisher

Comparison of Synchronous and Asynchronous Online Nursing Education: An Integrative Review

Background: In the past several years there has been an increasing prevalence of nursing education provided online. There are two ways to provide online education, synchronously and asynchronously. Little research exists as to one method is more effective than the other, especially relating to online nursing education. The Community of Inquiry (CoI) framework suggests that there are three interwoven domains that must be supported in order to provide effective online education: social presence, cognitive presence, and instructor presence.

Objective: The purpose of this integrative review is to examine several studies related to the efficacy of synchronous and asynchronous nursing education through the lens of the CoI framework.

Methods: After a search of five databases using a variety of search terms and filters during a search period of December 2020-March 2021, a total of five articles were selected and screened for relevance and strength of the research using a critical appraisal tool. Articles were then reviewed for themes related to the CoI framework.

Findings: Synchronous online education likely facilitates social presence and instructor presence better than asynchronous methods, and has the potential to facilitate cognitive presence better as well. However, factors like technological difficulties, large class size, and increased student age are cited as negative influences on synchronous education. The choice between synchronous and asynchronous methods must be tailored to the learner demographics and the educator's proficiency with synchronous education technology.

Caitlin Coveney

Faculty Sponsor: Kelly Fisher

[Implementation and Outcomes of the End-of-Life Nursing Education Consortium: An Integrative Review](#)

Background: There is an increasing demand on nurses to provide competent end-of-life (EOL) care, but many nurses report feeling underprepared to provide EOL care. The End-of-Life Nursing Education Consortium (ELNEC) curriculum has expanded as an educational intervention to fill this gap, in both professional development and prelicensure education. Little literature, however, addresses the outcomes of ELNEC in the prelicensure setting.

Research Question: What are the learning outcomes of the integration of the End-of-Life Nursing Education Consortium (ELNEC) curriculum in prelicensure nursing education?

Methods: An integrative review methodology began with an extensive literature search, yielding nine pertinent results. These articles were scored with a critical appraisal tool, and then examined critically to extract relevant themes. These themes were synthesized for conclusions about the outcomes of the ELNEC curriculum.

Findings: Several themes emerged from the available literature, specifically regarding the nursing role, family and communication, resilience, comfort and confidence, clinical practice, and persistent learning needs. The ELNEC curriculum yields improved confidence, understanding of the nursing role, and communication skills at EOL. Many learners recommend the inclusion of a clinical, practical, or simulation component to optimize preparation for providing EOL care.

Keywords: end of life, ELNEC, prelicensure nursing education

Tara Johnson

Faculty Sponsor: Kelly Fischer

African American Cultural and Historical Barriers to Health Promotion: Integrative Review

The intent of this review is to appraise published nursing research to identify the barriers affecting health promotion among African Americans and effective nursing strategies to overcome barriers affecting health promotion among African Americans.

Adriana Levy

Faculty Sponsor: Kelly Fisher

The effect of nurse residency programs for new graduate nurses on patient safety in acute-care hospitals: An integrative review

Purpose: Research shows that nurse residency programs (NRPs) increase retention and increase job satisfaction among new graduate nurses (NGNs). However, there is not adequate research on whether NRPs should be the standard onboarding process for hospitals in regards to patient safety. The purpose of this integrative review is to examine the impact of nurse residency programs on patient safety and how these programs can address the barriers and challenges of the new graduate nurse's transition to prevent medical errors.

Background: Medical errors and adverse events affect over 400,000 patients every year and can be very costly for hospitals. Transition shock experienced by NGNs puts them at higher risk for making mistakes than more experienced nurses. NRPs help ease transition for novice nurses, which might have an impact on patient safety.

Methods: The search strategy included searching five databases for articles from 2010-2021 by utilizing specific terms pertinent to the research question and Boolean operators. The strict adherence to inclusion and exclusion criteria and data extraction process narrowed down study selection to 11 articles for critical appraisal utilizing the Johns Hopkins Evidence-Based Practice appraisal tool. Results: Thorough analysis of the 11 research articles revealed six common themes among nurse residency programs that have a positive impact on patient safety.

Discussion: By increasing knowledge, confidence, competence, communication, and support, and decreasing stress, NRPs can improve patient safety practices among NGNs. Hospitals and nurse leaders should use the principles of NRPs to guide their orientation models for new graduates.

Conclusion: Despite the positive impact of NRPs on patient safety, there still remains a lack of research regarding the specific effects of nurse residency programs on patient safety metrics and if nurse residency programs should be the standard for all hospitals despite upfront costs.

Nursing Leadership – Graduate Program

Lynn Barry and Lauren Van Luling

Faculty Sponsor: Kelly Fisher

Fall Prevention Education as an Inpatient Strategy to Reduce Falls Post Discharge in the Elderly Population: An Integrative Review

Posthospital fall-related injuries are a leading cause for readmission and yet little has been learned on how to prevent these injuries and even less has been done to educate at-risk patients during the discharge process from a hospital stay (Hoffman et al., 2019). The purpose of this integrative review was to identify in-patient fall prevention education programs to decrease 30-day readmission rates for falls in the elderly population. A rigorous review of the literature was conducted using multiple electronic databases. Studies were included if they examined fall prevention strategies or tools for the elderly to decrease readmission after discharge from an acute care hospital. A total of 9 articles were chosen for this integrative review. This review of the

literature found that although posthospital fall-related injuries are a leading cause for readmission, evidence-based, quality tools, and preventative discharge education fail to exist. Taking into consideration the rapidly growing elder population and the costs associated with these mostly non-fatal falls payers and hospitals are appreciating the enormity of this problem. There is an urgent need for further research to develop effective interventions that will reduce falls in this population during the post-discharge period.

Deborah Bossey and Kate Morse

Faculty Sponsor: Kelly Fisher

[Resiliency Training for the Acute Care Nurse: An Integrative Review](#)

This integrative review sought to determine the current state of research about building resilience in nurses and combating the symptoms of compassion fatigue, secondary traumatic stress, and burnout.

Shelby Butwell

Faculty Sponsor: Kelly Fisher

[What Has a Greater Impact on Nurse Job Satisfaction: Monetary Reward or Personalized Recognition? An Integrative Review](#)

With a record number of nurses leaving the bedside each year, it is essential for nursing leadership to understand what keeps staff nurses satisfied in the workplace. The purpose of this study was to determine which retention strategy increases job satisfaction more, monetary reward or personalized recognition.

This integrative review analyzed articles to identify various retention strategies used in the workforce to increase nurse job satisfaction levels and decrease turnover rates.

Between September 2020 and January 2021, a search of MEDLINE and CINAHL Full text Plus databases, and an ancestry search was conducted. 9 articles were chosen to be included into the integrative review. Each was assessed using the John Hopkins Research Evidence Appraisal Tool to determine the strengths of the findings. The articles were formally reviewed for retention strategies used in nursing, as well as nurse job satisfaction strategies. A synthesis of the comparable retention strategies was completed.

Four main themes emerged from the data collected: Salary, Leadership Support, Relationships, and Performance incentives. It was concluded that all four of these retention strategies work in unison to increase nurse satisfaction levels. There are minimal studies that compare retention approaches. Further research is necessary to determine which strategies work best.

Joanne Cassell

Faculty Sponsor: Kelly Fisher

[Effectiveness of Acuity-Based Staffing on Nurse Satisfaction](#)

The purpose of this study was to determine the effectiveness of acuity-based staffing on nurse satisfaction.

Amy Edwards

Faculty Sponsor: Kelly Fisher

[The Impact of Leadership on Compassion Fatigue and Burn Out in the Emergency Department: An Integrative Review](#)

Background: The quality of leadership, as well as the style of leadership can greatly impact the department's nursing staff. The characteristics and traits of a nursing leader impact their staff. If leadership does not support quality nursing care and shared decision making, it increases the risk

for compassion fatigue and burnout among their staff. It is estimated that one in five RNs leaves the profession within one year of hire, while up to one-third leave within two years.

Objective: The aim of this integrative review is to examine the available literature about nursing leadership and the impact leadership style has on compassion fatigue and burnout for nurses in the emergency department. What specific leadership style, quality, traits, and characteristics of nurse leaders decrease emergency room nurse turnover, improve the nurse's resilience and increase job satisfaction and retention?

Methods: An integrative review was preformed and allows for exploration of previous literature. Systematic reviews are pivotal to the nursing profession with the connection to evidence-based practice allowing better practice and clinical guidelines. 5 scholarly articles were critically appraised using a critique tool to assess the quality and strength of each article.

Findings: The research reviews in this integrative review support the value and quality of nursing leadership have on the prevention of nurse burnout and compassion fatigue. Both leadership styles illustrated the traits, qualities and characteristics that impact the work environment therefore, decreasing burnout and compassion fatigue. There was no specific answer directly correlated to the emergency department. However, there was literature that clearly discussed certain styles of leadership that can be impactful to decrease burnout and compassion fatigue.

Conclusion: It is evident regardless of clinical area that manager and leadership support is a key predictor to burnout, compassion fatigue, compassion satisfaction, and engagement. If an increase in awareness from the institution may aid in improving leadership trust, therefore, preventing leadership burnout as well as preventing staff burnout. It is vital to the nursing profession to have holistic approach to continue to address, support, and find solutions to facilitate higher work engagement and work-life balance among nurses.

AnneMarie Fleming

Faculty Sponsor: Kelly Fisher

[Barriers to oral tuberculosis medication completion in the latent tuberculosis infection population: An integrative review](#)

INTRODUCTION: 13 million people in the United States (U.S.) have latent tuberculosis infections (LTBI) and more than 85% of all TB cases in the U.S. are from reactivation of LTBI. Understanding the barriers to LTBI treatment completion will facilitate the development of interventions to improve completion of treatment and reduce the number of cases progressing to active TB disease. **METHODS:** A systematic search was conducted in multiple online databases including Cinahl, Medline, PubMed, and Google Scholar among others. Search terms were used and limitations were applied. Articles were excluded if non-English, before 2015, pediatric, or not of North American origin or focus. Six articles were selected to review. All articles were assessed for quality using Polit and Beck's analysis and scored. Barriers to treatment completion were extracted and themes were assigned to a socio-ecological framework according to spheres of impact. The spheres were intrapersonal, interpersonal, organizational, community, and public policy. A narrative synthesis of the results was conducted.

RESULTS: The identified barriers to treatment completion for intrapersonal/individual factors were: age (<38, >65), being female, unmarried, smoking, alcohol/drug use, methadone treatment, concomitant medications, chronic medical conditions, cirrhosis, adverse effects from LTBI medications, higher education, U. S. born, lack of LTBI knowledge, fear of tolerability/toxicity of LTBI medications, missed clinic visit early in treatment, forgetfulness, being a health care worker. Interpersonal/staff barriers: unsympathetic staff, strained provider/patient relationship,

inconsistent messaging, unsatisfactory experience with a provider, lack of LTBI knowledge, lack of cultural awareness. Organizational/clinic barriers: inaccessibility, inconvenient hours, long wait times, lack of prioritization for LTBI, inadequate resources, lack of incentives/enablers, lengthy drug regimes, Social Worker on site. Community/environmental barriers identified: homelessness, lack of transportation, stigma, job loss, barriers to care. Public policy barriers: lack of health insurance/inadequate, medication costs, poverty/charity care, lack of LTBI Control strategies, inadequate LTBI resources.

CONCLUSION: Barriers to LTBI treatment completion occur at all levels of the socio-ecological framework. Identifying barriers to treatment for individuals would allow tailored interventions to address the risk of non-completion.

Key Words: Latent TB; LTBI; treatment completion/adherence; barriers; obstacles; challenges; difficulties; issues; problems.

Christine Howe

Faculty Sponsor: Kelly Fisher

[Peer Support compared to Resiliency Training](#)

Medical errors have been estimated at between 44,000-250,000 preventable adverse events per year. Rates of compassion fatigue, burnout, and nurse retention have increased dramatically. Peer Support programs & Resiliency training have been developed to address this issue. The shift from shame & blame to a "Just Culture," needs to be hard wired into the organization for compassion fatigue to be changed to compassion satisfaction.

Laura Moriarty

Faculty Sponsor: Kelly Fisher

[Best Practice in Providing Nursing Care for Patients with Autism in the Pediatric Emergency Department: An integrative Review](#)

Background: While a visit to the emergency department (ED) can be nerve-racking and stressful for any child, children with Autism Spectrum Disorder (ASD) face heightened and unique challenges in visiting the ED. A visit to the ED can be challenging for a child with ASD due to the overstimulating environment combined with their potential developmental impairments, emotional dysregulation, cognitive disability, sensory sensitivities, communication difficulties, and poor social interaction. The innately challenging aspects of a visit to the ED can make a child with ASD at risk of displaying adverse behaviors which can lead to poor outcomes or poor satisfaction of the patient, family, or caregiver. Children with ASD have unique needs from children without, and therefore it is crucial that nurses feel adequately prepared to care for them in their ED visits to achieve optimal outcomes. **Research Aim:** A formal Integrative Review of literature was conducted to identify best practice nursing techniques for caring for patients with ASD in the pediatric ED. **Methods:** A formal literature search was conducted September 2020 through February 2021 on electronic database CINAHL, along with a hand search and ancestral search of references. Strict inclusion/exclusion criteria were identified and followed. Fourteen articles were selected for final inclusion, which were then critically appraised and analyzed to identify conclusions related to the aim of this project. **Results:** Five themes strongly emerged from the literature: (a) Identification of ASD early in the ED visit for prompt awareness and recognition of sensory needs, (b) Collaboration with families/caregivers in decision-making, (c) Modification of ED environment to decrease stimuli, (d) Utilization of sensory-friendly resources to calm and distract child, (e) Education and training for staff on ASD to improve comfort and knowledge. **Conclusion:** Five themes were strongly consistent in the literature with regards to the aim of this study, and may be used to guide evidence-based nursing practice.

Psychology

Abigail Adams and Adriana Cogliandro-Vaughan

Faculty Sponsor: Kim Arditte Hall

[Attitudes Towards Binge Drinking Based on Age and Gender](#)

There is stigma surrounding binge drinking as it can become a problematic practice. People face judgement for their drinking habits, and it is believed in this study that young women suffer the most from this type of judgement. This poster presentation will outline a proposed research study to address this issue. The proposed study will be an experimental study. The study will be a 2x2 factorial design where participants react and respond to a vignette and survey. The independent variables to be manipulated will be both the gender and age of the character presented in the vignette and survey, and the dependent variable to measure will be the binge drinking stigma the participants show against the character. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Samirah Antenor, Caetlin Johnson, and Autumn Nisby

Faculty Sponsor: Kim Arditte Hall

[Color's Effect on Test Performance](#)

This study will be assessing how the color of paper could affect the test performance of a college student. This is important because it could provide support that colored paper will help students perform better on exams. This poster presentation will outline a proposed research study to address this issue. The proposed study will be an experimental study. The study will be an experimental design with a 3-level independent variable, color of the paper. The three levels will be hot pink, light yellow, and dark blue. The dependent variable will be the test performance score. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Danaejah Buissereth and Diana Marte

Faculty Sponsor: Kim Arditte Hall

[The Effect of Exercise on Psychological Mood](#)

The proposed study includes measuring how a participant feels after engaging in various exercise types. This particular information is useful for individuals to understand how exercise can affect mood. The exercising techniques will include walking, running, and jogging. After a participant is assigned to an exercise technique, they will be asked to report their mood. This poster presentation will outline a proposed research study to address this issue. The proposed study will be an experimental study. The study design will include a 3 level independent variable of walking, running and jogging. The dependent variable will be measuring psychological emotion. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Eryca Carrier

Faculty Sponsor: Aline Davis

[The Lasting Effects of Chronic Stress on the Human Animal](#)

Stress is one of the largest motivating factors behind an animal's behavior, and that certainly includes humans. Stress hormones are secreted by the hypothalamic-pituitary-adrenal (HPA) axis any time an animal's basic needs or ability to survive are compromised. As humans have evolved, the number of stimuli that arouse the stress response has increased exponentially. Debilitating stress responses may be frequently evoked by events that do not directly pose a threat to survival. Lively social gatherings, relationship conflicts, and piles of work responsibilities are a few common human-specific stressors that are enough to stimulate the HPA axis. Humans share a set of universal stress triggers, but more are apt to develop throughout a person's lifetime. Additionally, dysfunction in the HPA axis can also alter its reactivity on several fronts. This dysfunction may be due to genetic or epigenetic factors. Recurrent HPA axis activation leads to observable damage in humans. Memory impairments, emotion dysregulation, cardiovascular issues, and compromised immune function are but a few of the potential consequences. So, what is there to do when our survival mechanisms are posing the largest threats to our mortality? In this thesis, I have critically examined the role of the HPA axis in mediating the stress response, HPA axis dysfunction, the behaviors that result from stress, the relationship between stress and the development of psychopathologies, and skills that can be utilized to effectively cope with stress and its consequences.

Jennifer Correa and Vilmary Martinez

Faculty Sponsor: Deborah McMakin

[Women's Perceptions of Pro-Eating Disorder Websites](#)

On the internet, there are many websites that are not monitored and unfortunately there may be no age restriction on who can see this content. The internet makes everything easily accessible to anyone of any age, including pro-eating disorder websites. Pro-eating disorder websites that encourage unhealthy behaviors such as skipping meals and purging. This study aims to understand how aware women especially of these websites. In this study, there will be a sample of approximately 70 students that are currently enrolled in a small state university who will complete a survey regarding their own eating habits, pro-eating disorder websites and how they view them. Participant variables will be assessed through a survey demographics section (age, year of education, race, hours spent online). Findings and implications will be discussed.

Ivan Delacruz and Daniel Fuentes

Faculty Sponsor: Kim Arditte Hall

[How does negative, positive, and neutral attitudes toward vaccination relate to COVID-19 vaccine success?](#)

The research of COVID-19 in all facets of life is of vital importance. People should know current data about the efficacy of the vaccine since their beliefs, the denials, and the neutral attitude individuals have towards taking the vaccination are influential. This poster presentation will outline a proposed research study to address this issue. The proposed study will be an experimental study.

We're using the ANOVA 2x2 study design. The independent variables are the 3 groups were going to control, we're giving each group an informational article, Group A (Vaccine Success), Group B (Vaccine Failure) and Group C (Neutral Vaccine Attitude). The dependent variable is vaccine rates. Does manipulating information on the vaccine relate to vaccination success?

The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed

Julia Dudek, Alana Gardner, and Jacquelynn Schwalm

Faculty Sponsor: Kim Arditte Hall

[Examining the Relationships of Environment and Time Constraint on Test Performance](#)

With the prevalence of online usage in both academic and professional settings due to the COVID-19 pandemic, it is important to understand how this shift in environment relates to overall performance of tasks. Additionally, both online and in-person learning creates the need for time constraints on certain assignments. The purpose of this study is to understand the relationship between both the environment and the presence/absence of a time constraint on the overall performance on a basic arithmetic test. This study aims to find this relationship using a 2 (Environment; online, in-person) X 2 (Time Constraint; presence, absence) study design. This will be done by taking a random sample of our target population (college students age 18-24) and recording their performance on a basic arithmetic test in each of these conditions. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Vanessa Guerrero and Gabby Synk

Faculty Sponsor: Deborah McMakin

[How Social and Financial Stressors can impact Undergraduate Anxiety and Academic Performance](#)

Often students experience different levels of anxiety and stress while attending college. The present study examined how social and financial stressors can affect undergraduates' anxiety and academic performance in college. Specifically, how first and second year student's anxiety and stressors lessen, stays the same or gets worse compared to juniors and senior students and how that affects their academic performance. There were (# of participants, male and female) who were giving a survey on campus assessing their anxiety, social & financial stressors. Several scales were used to assess social and financial stressors, as well as coping strategies. This study aims to explore how different stressors and coping mechanisms may help or hinder students' academic performance. Results are discussed.

Jacqueline Hill and Brian Kozek

Faculty Sponsor: Deborah McMakin

[Season Cancellations and the Impact on Collegiate Student Athletes' Mental Health](#)

With the recent COVID-19 pandemic, athletes face day-to-day disruptions stemming from cancelled seasons and practices. Past literature indicates that these disruptions can come with negative side effects, both mental and physical. Since the pandemic is relatively new, there are few studies examining what kind of impacts these daily disruptions may have on student athletes' mental health. This research examined the impact of season cancellations on college student athletes' stress, anxiety, social support and athletic identity. A sample of approximately 60 student athletes attending a small university completed a series of self-report measures of athletic identity, social support, mental well-being. It is hypothesized that athletes who have had their season's cancelled due to COVID-19 will report higher levels of stress and anxiety than athletes who have not had their seasons cancelled. It is also hypothesized that athletes who have had their season cancelled will report different levels of mental health problems, athletic identity, and social support than athletes who did not have had their season cancelled. A series of one-way ANOVAS and correlations will be computed to examine the relationships among athletic identity, social support, and mental well-being in student athletes who had their seasons cancelled and those who did not. Implications for student athletes and athletic departments aiming to promote student athlete well-being will be discussed.

Hannah Lima, Kelsey Milinazzo, and Sarah Rullie

Faculty Sponsor: Kim Arditte Hall

[The Effect of Dunkin's Coffees on College Students' Heart Rate](#)

Framingham State University has a Dunkin's on its campus that is popular among its professors, staff, and students. Caffeine is a stimulant in coffee that when consumed in excess, can lead to health complications such as anxiety, dependency, and high blood pressure. It is cause for concern when individuals are regularly consuming more than the daily recommended amount of caffeine from coffee. This poster presentation will outline a proposed research study to address this issue. The proposed study will be an experimental study. The study will use one independent variable with three levels in a single-blind study. The independent variable and its levels will be the type of coffee participants are told they have been given (regular iced coffee, decaf iced coffee, cold brew coffee). However, all participants will receive the same control of decaf iced coffee. The dependent variable will be the perceived anxiety after drinking the coffee. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Knile McDowall, Elizabeth Siok, and Zariah Thompson

Faculty Sponsor: Kim Arditte Hall

[Autism Stigma](#)

With over three million people in America having ASD, also known as Autism Spectrum Disorder, the lack of knowledge surrounding this disorder is concerning. A lack of knowledge can lead to a lot of stigma surrounding the disorder which leads to an importance in studies to determine what factors lead to increased stigma around ASD. This study used a 2x2 design in which the independent variables used being gender and age. The two levels of the independent variable gender are male and female, while the age independent variables are distinguished through autistic children and adults. The dependent variable at hand is the stigma shown towards ASD from the participants reacting to the scenario presented to them in the study. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Julianne Mola and Sara Price

Faculty Sponsor: Deborah McMakin

[The impact of alcohol policies on university life for students](#)

Institutions of higher education have varying types of alcohol policies. The goal of implementing alcohol policies at universities is to restrict alcohol related problems. However, less is known about the impact of the alcohol policy have on student perceptions of their campus and their willingness to risk the consequences of alcohol consumption. Some research has suggested that gender and age affects alcohol consumption. There's limited research on whether a university's alcohol policy influences a student's college experience and their desire to stay all four years at their university. The purpose of this study is to understand how alcohol policies impact a students' university life and their desire to stay at that university. A sample of approximately 40 college students will complete an online survey regarding questions and statements about alcohol consumption and the university's alcohol policy. A series of correlational analysis will be computed to examine the relationship between student perceptions of the alcohol policy and their willingness to risk consequences for consuming alcohol on campus. It is predicted that students' willingness to accept risk and consequences from breaking alcohol policies will be related to knowledge of alcohol policies. It is also predicted that the majority of students will have low knowledgeable of the

university alcohol policy and that there will be a correlation between alcohol consumption and risk taking. Findings will be addressed relating to the relationships between student perceptions of the university's alcohol policy and their willingness to accept risk and consequences that come from consuming alcohol on campus. Results will be discussed as they address the knowledge students report on the alcohol policy over the years they attended their university.

Kaylin Patterson-Soar and Kyle Smith

Faculty Sponsor: Kim Arditte Hall

[Appropriate Sexual Harassment Punishments for Different Aged Perpetrators](#)

This study will examine the difference in what the public views as appropriate punishments for sexual harassment perpetrators of different ages. Sexual harassment is an issue affecting people of all ages, but will the age of the perpetrator change what punishment is considered appropriate? This poster presentation will outline a proposed research study to address this issue. The proposed study will be an experimental study. This study consists of one 3-level independent variable, age of the perpetrator including 15 years, 25 years, and 45 years of age. The study will measure the severity of the punishment the participants deem fit for the perpetrator. The poster presentation will include an introduction outlining previously published research on the topic, the methods to be used, including a description of the study participants, experimental manipulations and/or measures, and procedures. Finally, the presentation will include a preliminary data analytic plan explaining how collected data will be analyzed.

Sociology

Natasha DeLeon, Kathyuska Gaitan, and Melikke Van Alstynne

Faculty Sponsor: Xavier Guadalupe-Diaz

[Acculturation: A Study on Language, Identity, and Cultural Conformity within Second Generation Immigrants](#)

Emigrating to a new country brings about challenges across many spectrums, especially when it comes to raising children. Second-generation immigrant children, or U.S born children to immigrant parents, probably face the greatest challenge of all: navigating their native culture and American culture. Using data from the Children of Immigrants Longitudinal Study (1991-2006), this research seeks to examine how children of immigrants experience exposure to their native culture and American culture. The initial survey included children in the 8th and 9th grade with an original sample size of 5,262. The study lasted 15 years. The goal of the present research is to analyze how second-generation children maintain aspect of their heritage culture while adopting American culture. We expect to find that children who are exposed to their heritage culture along with American culture are more likely to experience biculturalism. The results will be consistent with our original hypotheses. This is because the hypotheses are based on the selective assimilation theory that posits that children who are exposed to their ethnic culture while learning the American way can maintain biculturalism. The results of these findings disprove the notion that American culture conflicts with development and maintaining of ethnic cultures. It shows that cultures can blend. The current research can be used as a base to analyze second-generation immigrant children that may not experience biculturalism.

Abigail Salvucci

Faculty Sponsor: Lina Rincón

[The Overlooked Victims of Insecurity: A Look into a 4-Year Public University's Handling of Food and Housing Insecurity](#)

Food and housing insecurity continues to be a growing concern within the United States (Freudenberg, Goldrick-Rab and Poppendieck 2019). By 2016, 39% of college students were from households with incomes at or below 130% of the federal poverty line, an increase from 20% in

1996 (Freundenberg et al. 2019). This issue of food and housing insecurity amongst college students is often ignored or overlooked. This research is an exploratory case-study examining a public four-year university in the Northeast, and the experience of students in regards to food and housing insecurity. This research utilized in-depth qualitative interviews with two staff members at the university involved in the student support network, and three undergraduate students with experiences of housing and food insecurity. The current research reveals that the case-study university utilizes many of the recommended safeguards from the literature, such as on-campus food pantries, emergency funding, and meal vouchers. However, students indicate that they are unaware of many of the resources offered by the university. The findings indicate that the interviewed professional members are aware of the disconnect between the safeguards offered and the students' knowledge of safeguards, but question if the ability to build this connection is capable within their limited resources. This study uncovers how universities handle student housing and food insecurity often does not stem from a lack of care from the university, but a lack of understanding on the issue of insecurity and how to dismantle the stigma that students experiencing food and housing insecurity face when it comes to accessing and using support resources offered by universities and other organizations.

Studio Art

John Paul Blanchette

Faculty Sponsor: Erika Schneider

[Godstar: The Art of Genesis Breyer P-Orridge](#)

The presentation will focus Genesis' artistic output. Covering his controversial performance art work with the group COUM and later artistic output.

Haley Donahue

Faculty Sponsor: Erika Schneider

[Humanities Quest for Utopia: Lee Bul](#)

Lee Bul's career in art investigates the intersections between the human body and technology, her juxtaposition of the human body with the technological advances of utopian and dystopian futures creates a body of work that scrutinizes the sexualization of the female body and the predominance of the male gaze in the world. Through works such as *Transhuman? Cyborg W1-W4*, 1998 and *Aubade V*, 2019 Bul represents the effect of technology on our society and perceived self improvements through those technological advancements. Bul also draws on her childhood in Korea to highlight the connection between continued technological advancements and militarization.

Daniele Farias de Pontes

Faculty Sponsor: Erika Schneider

[Jay Lynn Gomez](#)

Jay Lynn Gomez, formerly Ramiro Gomez, is an American artist who seeks to bring visibility to social inequality and the struggles of immigrant and/or Latine workers in Los Angeles. Her work can take many forms, from original paintings to appropriations of famous artists. But what stays constant is her subject. By painting everyday scenes of the Latine working class performing their jobs, Gomez invites us to stop and consider the people we often overlook and the romanticization of life in Los Angeles.

Jennifer Hensel

Faculty Sponsor: Erika Schneider

[Teresa Margolles: Giving Power to the Voiceless](#)

The social causes and consequences of death, destruction, and civil war take center stage in contemporary Mexican Visual Artist Teresa Margolles installations and performances. Margolles offers a voice to the deceased- often overlooked because of gender or social status, those that can no longer speak for themselves in the wake of extreme violence and tragedy. Margolles not only uses city morgues as inspiration but sources her materials from them as well. Whether it's the vaporization of liquid that was once used to wash the bodies of a morgue into a gallery space; or the utilization of architectural remnants from the center of the city of Juarez, a cite of femicide where those responsible ultimately were granted impunity by the state, Margolles' work calls for recognition to the many that are deemed worthless in the eyes of society.

Erin Kapurch

Faculty Sponsor: Erika Schneider

[Teresita Fernandez](#)

Teresita Fernandez is a conceptual artist who creates a wide range of work in varying mediums, but she is best known for her sculptures. Her work deals with the intersection between nature and society. She is inspired by the historical tradition of landscape painting, as well as by land artists, such as Robert Smithson. She manipulates space and perception in her exhibits to create an immersive experience.

Sayana Medina-Carrasco

Faculty Sponsor: Erika Schneider

[Rebecca Belmore](#)

Rebecca Belmore reflects contemporary art trends because she combines subjects and concepts of culture with her sculptures and performances.

Rebecca Belmore is diverse by adding a new performance vocabulary for women of First Nations individuality in the art world. She expresses her work by using a female as her canvas and creates different narratives in each work.

Danielle Ray

Faculty Sponsor: Erika Schneider

[Joe Minter](#)

The Hanging Tree, is a sculpture created out of steel rods, chains, and a tree like tripod structure. This piece represents the trees used for the lynching and hanging of African Americans. The steel rods represent the bodies of these African Americans who lost their lives. When you view this piece the shadows casted by the hanging rods produce an eery feeling and we are confronted by the horrors they represent. This sculpture created in 1996 by Joe Minter and others like it, educate us of the mistreatment and displacement of African Americans in America. Minter uses objects that have been thrown away and discarded to echo the manner in which he feels African Americans were and are still treated and made invisible. His sculptures of welded together found objects are strong symbols that speak to the years African Americans spent in slavery and in chain gangs and to the brutality that awaited them in their "freedom". With everything going on in today's society these pieces are crucial to cultivating an environment where people do not turn a blind eye but look at them and then make a change for a different future.

Lee Seaman

Faculty Sponsor: Erika Schneider

Zanele Muholi

Zanele Muholi is a South African photographer and self-described visual activist whose work is focused on displaying the South Africa's LGBT community. They have created series of striking black and white photographs such as their series Only Half the Picture which shows intimate glimpses into the lives of the Black LGBT community. In another of their series also featuring black gay and transgender people, Faces and Phases, the subjects of the portraits gaze directly out at the viewer. Muholi's work forces the viewer to acknowledge the existence and humanity of South Africa's LGBT community in spite of the ongoing violence against it.