The Office of Research URSS Video Competition 2020 YouTube Playlist can be found Here.

**Duquesne University OT: The Link Between Education and Community Engagement**
By: Kate de Castro, Jayme Kraft, Moriah Boyd, Aubrey Boucher, Laurie Liu, Emily Duessel  
**Major:** Occupational Therapy  
**School:** Rangos School of Health Sciences  
**Faculty Advisor:** Amy Mattila, Ph.D.  
**Link to Video:** [https://www.youtube.com/watch?v=DOIpSo8eVC0&t=8s](https://www.youtube.com/watch?v=DOIpSo8eVC0&t=8s)  
This video introduces our year-long project of working with individuals who have a diagnosis of Dementia at Vincentian Home in Pittsburgh, PA, by applying the client-centered occupational therapy skills learned in the classroom to serve our community.

**Helping Adults with IDD Achieve Their Goals**
By: Caroline Crilly, Jillian Hartranft, Katelyn Mulvey  
**Major:** Occupational Therapy  
**School:** Rangos School of Health Sciences  
**Faculty Advisor:** Amy Mattila, Ph.D.  
**Link to Video:** [https://youtu.be/y33BwQO3kiE](https://youtu.be/y33BwQO3kiE)  
As Duquesne occupational therapy students, we are working with the individuals at ACHIEVA to help their voices and goals be heard so they can become more independent in the community.

**Occupational Therapy for Refugee and Immigrant Youth**
By: Taylor Martin, Aleyna Collins, Rebecca Lord  
**Major:** Occupational Therapy  
**School:** Rangos School of Health Sciences  
**Faculty Advisor:** Amy Mattila, Ph.D, OTR/L  
**Link to Video:** [https://youtu.be/kG4M8Zh1s80](https://youtu.be/kG4M8Zh1s80)  
This video conveys the role of Occupational Therapy for refugee and immigrant youth through the collaboration with ARYSE which is a local non-profit organization that provides after-school programming services for youth who are refugees or immigrants.

**Downtown Outreach Center and Shelter: Occupational Therapy's Role**
By: Sophia Kosmides, Tyler Boseck, Matt Jockers,  
**Major:** Occupational Therapy  
**School:** Rangos School of Health Sciences  
**Faculty Advisor:** Amy Mattila, Ph.D, OTR/L  
**Link to Video:** [https://www.youtube.com/watch?v=BpwjH0pJRIQ](https://www.youtube.com/watch?v=BpwjH0pJRIQ)  
This video addresses the role of Duquesne University Occupational Therapy students at DOCS and the need for OT in this population.

**Renewal**
By: Sarah Howard, Clair Sartori, Lindsay Heinz  
**Major:** Occupational Therapy  
**School:** Rangos School of Health Sciences  
**Faculty Advisor:** Amy Mattila, Dr.  
**Link to Video:** [https://youtu.be/k6Pp0dTtlrQ](https://youtu.be/k6Pp0dTtlrQ)  
This project displays the services that Duquesne OT students provide to women in a local inpatient substance use recovery program.
Behind the Red Door: Occupational Therapy at St. Anthony's Life Skills Apartment
By: Olivia Van Dyke, Abigail Rubino, Bridget Newns, Avery Musiak, Alyssa Boccardi
**Major:** Occupational Therapy  **School:** Rangos School of Health Sciences
**Faculty Advisor:** Amy Mattila, PhD, OTR/L
**Link to Video:** [https://youtu.be/M5B6wjMPbQI](https://youtu.be/M5B6wjMPbQI)
*S. Anthony’s Life Skills apartment is a place where occupational therapy helps individuals with intellectual disabilities increase their independence in household tasks, navigate the community around them, and give them confidence to achieve their goals.*

Shepherd's Heart House of Hope
By: Emily Casile, Kelsey Gorman, Husnick Gia
**Major:** Occupational Therapy  **School:** Rangos School of Health Sciences
**Faculty Advisor:** Amy Matilla,
**Link to Video:** [https://youtu.be/p94ourSPgo4](https://youtu.be/p94ourSPgo4)
*Inaccurate social stigma impacts the men of Shepherd's Heart everyday, this video hopes to show who the men of Shepherd's Heart really are.*

Making my Brother a Pop-Star
By: Jonah Hanlon
**Major:** Music Education  **School:** Mary Pappert School of Music
**Faculty Advisor:** Rev. James McCloskey, C.S.Sp., Ph.D.
**Link to Video:** [https://www.youtube.com/watch?v=c1srtBShEUQ](https://www.youtube.com/watch?v=c1srtBShEUQ)
*My brother Cullen, who has Down syndrome, wants to be a pop-star, so I helped him write and record a song and film a music video; everything you see, and hear in this music video is all Cullen!*

Gwen's Girls: The Role of OT
By: Alyssa Hersey, Raphaela Libunao, Gina Stephenson
**Major:** Occupational Therapy  **School:** Rangos School of Health Sciences
**Faculty Advisor:** Amy Mattila, Ph.D, OTR/L
**Link to Video:** [https://www.youtube.com/watch?v=876oMvhxQmM](https://www.youtube.com/watch?v=876oMvhxQmM)
*This video is about our experience and role during our time at Gwen's Girls.*

Self Awareness Program at the Auberle 412 Youth Zone
By: Morgan Cargiulo, Paige Tademaru, Veronica Herubin
**Major:** Occupational Therapy  **School:** Rangos School of Health Sciences
**Faculty Advisor:** Amy Mattila, Ph.D, OTR/L
**Link to Video:** [https://www.youtube.com/watch?v=5v_X-18OFow](https://www.youtube.com/watch?v=5v_X-18OFow)
*This video highlights our role as occupational therapy students in our program centered around self-awareness at the Auberle 412 Youth Zone.*
Undergraduate Research Video Competition
Duquesne University | 2020
Sponsored by the Office of Research

Dynamics Near Absolute Zero Temperatures
By: Katelyn Spadavecchia
Major: Physics School: Bayer School of Natural and Environmental Sciences
Faculty Advisor: Michael Huster, Ph.D
Link to Video: https://www.youtube.com/watch?v=GddT7t1tPkbo
This video is an exploratory look into how matter behaves at ultra cold temperatures, and what implications this type of research could have on technology in the future.

Infant Development Lab, START-Play Research
By: Claire Boe, Jessie Spirnak, Amber Delprince, Karl Jancart
Major: Physical Therapy School: Rangos School of Health Sciences
Faculty Advisor: Regina Harbourne, Ph.D.
Link to Video: https://youtu.be/-HlHp81x-L6l
This video outlines the aspects and functional uses of the Angles App which is used by START-Play and the Infant Development Lab for various research projects.

Popping China’s Bubble: An explanation of the conflict between economic health and the Chinese Dream
By: Alexander Wolfe
Major: Economics School: McAnulty College of Liberal Arts
Faculty Advisor: Matt Ryan
Link to Video: https://youtu.be/NFRWhiCZvFE
This purpose of this paper is to outline the institutional, financial, and cultural drivers that have led to extensive volatility in the Chinese financial system.

C.O.D.E. Green: Elevated Garden Bed
By: Olivia Shope, Emma Naegler, Delaney Batik, Catherine Colpoys
Major: Occupational Therapy School: Rangos School of Health Sciences
Faculty Advisor: Richard Simpson, Ph.D., ATP
Link to Video: https://youtu.be/vpeF7Gyg6k4
An affordable and easily-constructed garden bed that is accessible and adjustable to individual needs.

Fluid-Structure Interaction Modeling of Cardiovascular Biomechanics
By: Tyler Bishop, Scott Toth, Brennon LeCave
Major: Biomedical Engineering School: Rangos School of Health Sciences
Faculty Advisor: Rana Zakerzadeh, Ph.D.
Link to Video: https://youtu.be/SQUuwWSmd2Y
The computational modeling of blood flow in an aneurysm to predict the pressure drop across the stenosis.

Gesture Morse Code
By: Tyler Boseck, Emily Casile
Major: Occupational Therapy School: Rangos School of Health Sciences
Faculty Advisor: Richard Simpson, Ph.D., ATP
Link to Video: https://www.youtube.com/watch?v=PK_EVCRyFdw
This video highlights the progress of our current research on Morse Code for alternative communication

**Analysis of RarA, a Unique Metalloid Reductase from Sulfurospirillum barnesii SES-3**  
_by: Lauren Rebel_  
_major: Biology_  
_school: Bayer School of Natural and Environmental Sciences_  
_faculty advisor: John Stolz, Ph.D._  
_link to video: https://youtu.be/c1GvgumZfBU

This project focused on the extraction of active reductase RarA from pure cultures of Sulfurospirillum barnesii SES-3 in order to investigate its affinity for various metal and metalloid substrates.

**Anti-Semitism in Medieval Art**  
_by: Erin Ridge_  
_major: Classical Civilizations & Philosophy_  
_school: McAnulty College of Liberal Arts_  
_faculty advisor: Amy Cymbala, Ph.D._  
_link to video: https://youtu.be/f39X0PbS6Ns  
_I discuss what an illuminated manuscript is, the roots of anti-Semitism, and show cases of it in art._

**Media In Early Adulthood: Defining the Differences of Three Generations**  
_by: Anita Parrott_  
_major: Marketing_  
_school: A.J. Palumbo School of Business Administration_  
_faculty advisor: James Vota_  
_link to video: https://youtu.be/ADW9pcv3sIM  
_In characterizing the differences in attitudes of three generations of people among the same age group, I will clarify the differences in where these groups see themselves in media, and what societal changes have directed the sources of their identity._

**PDE Based Deep Learning for Geometric Image Data**  
_by: Ryan Cecil_  
_major: Mathematics_  
_school: McAnulty College of Liberal Arts_  
_faculty advisor: Stacey Levine, Ph.D._  
_link to video: https://youtu.be/5qWa4M_GxUy  
_An introduction to the field of image processing and our work on a partial differential equation based deep learning model for geometric image data._