During the Summer of 2024 recipients of these awards were able to spend their summer conducting research under the guidance of faculty mentors as well as showcase their work in the Symposium for Undergraduate Research and Creative Activity

Unidel-Roselle Award

Eligibility Requirements: This award if for students who have a high GPA at the time of application.

Student Name	Faculty Name	Research Topic
Owen Bruce Donnelly	K. Wommack	Enterobacteria phage T7 DNA Polymerase I point mutation greatly affects enzyme activity
ABIGAIL PIPER SPANGLER	Aditya Kunjapur	Investigating a phenylserine dehydratase from R. pickettii and aminotransferase from E. coli for nonstandard amino acid production
Emma Catherine Guzzetti	Emily Day	Purification of DiD-Encapsulated Nanoparticles Through Triton-Washing
Moire Hedri Gervay	Katie Leech	Typography Beyond Borders: A Comparison in Design Systems of the United States and the United Kingdom
ELISE MARIE RUGGIERO	Daniel Stevens	Muses in the Making: Composing and Producing Modular Music to Identify Unique Audio-Sensory Preferences in Individuals on the Autism Spectrum
Vincent Michael Tucci	James Butkiewicz	Student-Centered Learning: Leveraging AI TAs for Educational Success
Daniel J Bowers	David Edwards	Models for Weld Temperatures in Additive Manufacturing
EMILY BORELL	Deni Galileo	Effects of Small-Molecule Inhibitors on Motility and Proliferation of Differentiated and Undifferentiated Glioblastoma Stem Cells
SHRIYA RAJESH BAGDI	Jason Gleghorn	A Simple Gradient Generator for Morphogen Patterning in Microphysiological System
Dylan Tanson Ngo	Jason Gleghorn	Developing manufacturing methods for a lymph node-targeted cancer drug delivery vehicle

MEGAN ELISE TARR	Mark Blenner	Enhancing Plastic Degradation Through Mealworm Gut Enzyme Cocktails and Cascades
Zachary Waterman	Deni Galileo	Assessment of Small Molecule Inhibitors on Glioblastoma Cell Invasiveness in an Ex Vivo Brain Slice Culture System
Shelby Elizabeth Nelson	Joseph Fox	Thiomethyltetrazine Based Reversible Covalent Chemistry Hydrogels to Support 3D Cell Culture
Aaron Oster	Jason Gleghorn	Using Machine Learning for Robust Protein Function Prediction With a Large Language Model
MAKANA RODNEY STEINMETZ	Dawn Elliott	Pre-processing Spine MRI to Expedite Disc Segmentation
Hannah Esther Weile	Jeremy Bird	The Use of Type III-A CRISPR-Cas Systems to Determine Sequence Importance in E. coli's Defense Against T4 Phage
Christopher S Peters Jr.	Joshua Cashaback	Human Motor Planning Approaches but Fails to Achieve Optimal Indecisiveness
Kira Mary Byers	Jason Gleghorn	Development and finite element modeling of modular organ-on-chip platforms
Hanna Rose White	Mark Blenner and Dion Vlachos	Plasma Oxidation to Aid LDPE Biodegradation
VICTORIA ALVES	Kyle McCarthy	Wildlife Dynamics Along Major Roadways in New Jersey
Noah Grey Durbin	Nathan Lazarus	Using obfuscation and post-processing for IP protection in 3D printed electronics
Sarah Lynn Janney	Joseph Fox	Chemically-Induced Bacterial Cell Lysis via Tetrazine-trans-Cyclooctene Crosslinking on Modified Peptidoglycan
Maya Jade Feinstein	Xinfeng Liang	Vertical Motion in the Southern Ocean
PATRICK JOSEPH FLAHERTY	Liyun Wang	Axial Loading and Testing of Femurs
ZACHARY CHERUBOUN DIXON	Mark Blenner	Spatial-proteomic approach to identifying targets involved in antibody production

Laura Therese D Garcia	Hui Fang	CoachGPT: An AI Tool to Transform the Student Writing Process
Margaret Elizabeth Armstrong	Siobhan Carroll	The History of Creative Writing
SHAYNA DYLAN DEMICK	Mi-ling Li	PFAS bioaccumulation in the Bering Sea food web
MORGAN AMELIA BOULDEN	Monica Frichtel	Civics in Movement: The Development of an Arts-Integrated Curriculum
Piper Michelle Priddy	Matt Oliver	Predator Speeds and the Encounter Rates with Lagrangian Coherent Structures in the Atlantic Ocean.
Evyn Yun Appel	Allison Karpyn	Understanding Food Stigma in Nutrition Assistance Programs
Caden Scott MacHenry	Jessica Tanis	Investigating the protective effects of vitamin B12 on amyloid-beta proteotoxicity in a C. elegans model of Alzheimer's Disease
JOAQUINA FIORELLA SOMMA VALDEZ	Catherine Fromen	Effect of tonsil size on aerosol deposition in the upper-airways
Sophie Danielle Levine	Richard Hanley	The Philosophical Vagueness of Abortion
AYELET YARDENA WIEDERHORN	Katie Leech	Hebrew Typography as a Bridge to Cultural Identity
ISABELLA LAM	Miranda Wilson	Marriage and Other Unexpected Parties: Depicting Queer Joy in Shakespeare

Psychology UG Summer Scholar

Eligibility Requirements: Created in 2018, This award is restricted to Psychology majors to who will participate in Undergraduate Research through the Summer Scholars Program.

Student Name	**Faculty Name**	**Research Topic**
Leah Grace Alexander	Anjana Bhat	Prevalence of Mental Health Issues in Children With Developmental Disorders: An Analysis of the National Survey of Children's Health Dataset
TIFFANY LYNCH-FAULKNER	Evan Usler	Exploring Speech-Related Motivation and Neural Correlates of Approach-Avoidance Conflict in Individuals with Social Anxiety and Fluency Disorders

Research & Creative Works Fund

Eligibility Requirements: This award is designated for underserved students conducting research in areas within social and behavioral sciences, arts or other and humanities

Student Name	Faculty Name	Research Topic
Alondra Gonzalez	Noel Archambeault	Exploring Mariachi Styles of Music and Vibrato Techniques

WAY Foundation

Student Name	Faculty Name	Research Topic
Amanda Heil	Michael Frassetto	The Manifestation of Folkloric Motifs in the Portrayals of 6th Century Merovingian Queens
MIRANDA ANNE ROSE ASKEY	Jessica Sowa	Investigating Advocacy Efforts for Missing and Murdered Indigenous Women and Girls
CARA LEE MCDONALD	David Brinley	Exploration of the Human Relationship with Technology Through Storytelling and Book Arts
Marquaya Bennett	Sara Goldstein	Plan A or Plan B: College-attending Emerging Adults' Perceptions of Birth Control Access
Elizabeth Alexandra Roros	Mark Warner	Will genotypes of Breviolum minutum retain thermal tolerance? Photochemical analysis of Caribbean symbiotic dinoflagellates across various heat exposure

STEM Studies Support Funds

Eligibility Requirements: Created in 2022, this award is for students who demonstrate financial need and are first generation and/or underrepresented students studying in STEM related fields.

Student Name	Faculty Name	Research Topic
Caleb Thomas Lawson	Mark Blenner	Engineering Y. lipolytica for the de novo Production of Halogenated Tryptamine

Tom Minh Le	Jason Gleghorn	Phylogenetically Balanced CDS Datasets for Improved Expression Modeling
ARAVIND KUMAR ARUNACHALAM	Eleftherios Papoutsakis	Manipulating Electron and Nitrogen Flux to Improve Product Selectivity and pH Control in a Syntrophic Clostridia Consortium
SAMANTHA PAM CHITTAKONE	Ping Chin	Quantifying Stemflow Lignin Concentrations Among Three Deciduous Tree Species
SIMONE LORAE MEYERS	Charles Dhong	Chemical Surface Texturing through Block Copolymer Morphology
AILYN LOPEZ	Elise Corbin	Phenotypic Analysis of Mouse Tenocytes in Transition to Pathophysiological Elastic Moduli
Adil Sheikh	Rachel Davidson	Understanding Mechanisms of Degradation in CuOx Nanoparticles and Electrocatalysts for CO2 Reduction
Kirin-Justin Stevens	Mohsen Badiey	Project MARS (Marine Acoustic Recording System
AXEL ADONAI RODRIGUEZ-LEON	Matthew Mauriello	Co-Creative Artificial Intelligence Integration in a Character Creation Interface for Video Game Development

Northeastern Chemical Association

Eligibility Requirements: This award is for students who are chemical engineering majors.

Student Name	Faculty Name	Research Topic
JAKE THOMAS GEORGE	Norman Wagner and Ted Egnaczyk	Effects of Curing Conditions on Material Properties of BP-1 Lunar Regolith Simulant Geopolymer Binders

Hellen-Pattison Student Population Research

Eligibility Requirements: This award is for students who are working on areas of research specifically focusing on issues involving human population topics.

Student Name	Faculty Name	Research Topic
Destiny Spivey	Roderick Carey	The Evolution of Black Masculinity in Televised Media
Catherine Osinubi	Edward Hartono	Utilizing MIS to Revitalize Business: Phase 3 - Formulating a Plan
Fanta Barry	Laura Fields	Acknowledging Student Loan Complexities
Kaitlyn Sabrina Goblirsch	Anna Klintsova	Long-Term Effects of Early Postnatal Single-Day Alcohol Exposure on Neuron and

		Astrocyte Populations in Nucleus Reuniens in a Rat Model of FASD
BAILEY BLEWITT	Angela Hattery	Lower Your Expectations: A Quantitative Analysis of Individual-Level Factors Influencing Black and Latino IPV Survivors' Experiences of Institutional Betrayal by the Criminal Legal System
Eli Theodore Hevalow	Jeffrey Buler	Spatial Distribution and Demographic Patterns of the Northern Saw-whet Owl (Aegolius acadicus)
ELISE MARIE RUGGIERO	Daniel Stevens	Muses in the Making: Composing and Producing Modular Music to Identify Unique Audio-Sensory Preferences in Individuals on the Autism Spectrum
Sophia Anne Surdovel	Nancy Jordan	Elementary Students and Early Fraction Learning: A Closer Analysis of the Qualitative Reasoning Displayed by First Graders

Orr Family Research Fund Award

Created in 2018, this gift is being made in memory of Bettye Barton Orr, the beloved wife of James E. Orr Jr, and in honor of three generations of Orr men who found their life partners at the University.

Eligibility Requirements:

Students need to be conducting research in STEM (science, technology, engineering, and math) fields.

Student Name	Faculty Name	Research Topic
Nathan Manning	Nikolas Schonsheck	Tracking Cyclic Features of Neural Coding Using Topological Data Analysis

Delaware BioScience Assoc.

Student Name	Faculty Name	Research Topic
LARISSA ANN CHELIUS	Joshua Cashaback	A history of reward causes a decrease in error corrections in sensorimotor adaptation

Seshadri Family, STEM

Student Name	Faculty Name	Research Topic
WESLEY CARSON	Karl Booksh	Multi-label Classification of Antacid Tablets via LIBS Spectroscopy

NICOLE ALEXA GILL	Catherine Fromen	Survival Analysis and Identification of Pro-Survival Signal From Macrophages Treated With PEG-Based Nanoparticles

Engineering/Nagle

Student Name	Faculty Name	Research Topic
ANDREW JOSEPH BRYCELAND	Guoquan Huang	Quadruped State Estimation
Matthew LeCates	Zubaer Hossain	Atomistic Basis of Thermomechanical Property Variations in Defective Hypersonic Materials
XAVIER JOSHUA STEPHENSON	Zubaer Hossain	Atomistic Basis of Thermomechanical Property Variations in Defective Hypersonic Materials
Nikil Jaikumar	Somnath Sengupta	My Life Learning Center
Ryann Jeanne Chatfield	Jason Gleghorn	Advancing Manufacturing Methods for Drug Delivery Carriers for the Treatment of Lymph Node Resident Diseases
Aaron Thomas Maniyatte	Jason Gleghorn	Development of a Manufacturing Pipeline For Cell-Mimetic Drug Carriers
Katherine Zucaro	Jason Gleghorn	Characterization of Cell-mimetic Microparticles (MP) for Sustained Delivery of Therapeutics
Nikil K Jaikumar	Somnath Sengupta	My Life Learning Center
Lauren Eaton Karpyn	Kedron Thomas	Unskilling Labor: A Historical and Political Analysis of Labor Classification in the Fashion Industry
Farhan Khondaker	Anna Wik	North Wilmington Natural Corridors in Urban Landscapes
Lucia Marckioni	Katie Leech	Branding the Game: Leveraging NHL Graphic Design Strategies for University Athletic Programs
Jared Jonathan Wierzbicki	Arthur Trembanis	Ghost Pot Detection and Removal Through Low-Cost Sidescan Applications
Mackenzie Hennessy	Sunita Shah Walter	Effects of Tidal Stage on the Concentration of the Elusive Polar Fraction in Estuarine Systems
Sean Connor Williams	Eric Bardenhagen	UD Landscape Architecture/New Castle County Parks Collaboration at Talley Day Park
JULIA ASHLYN BRADY	Kedron Thomas	The Desire for Environmental Change and the Need for Sustainable Practices
Aleena Sabir	Eric Bardenhagen	UD Landscape Architecture/New Castle County Parks Collaboration at Talley Day Park
Catherine Osinubi	Edward Hartono	Utilizing MIS to Revitalize Business: Phase 3 - Formulating a Plan

Ciara Molly McCarron	Anna Wik	Community Park Design: Enhancing Children's Awareness of Nature and Ecosystem Services
Faith Alyssa Moen	Anna Wik	Anna Wik Research Internship
NATALIE ROSE HEINDEL	Sheng Lu	Understand Extended Producer Responsibility (EPR) Legislation on U.S. Fashion Companies' Supply Chain Strategies