

2026

Undergraduate Scholars Showcase

Featuring:

URCA Associates and Assistants

Outstanding Senior Assignments

CODES Presentations

Friday, April 24, 2026

9:00 am - 12:00 p.m.






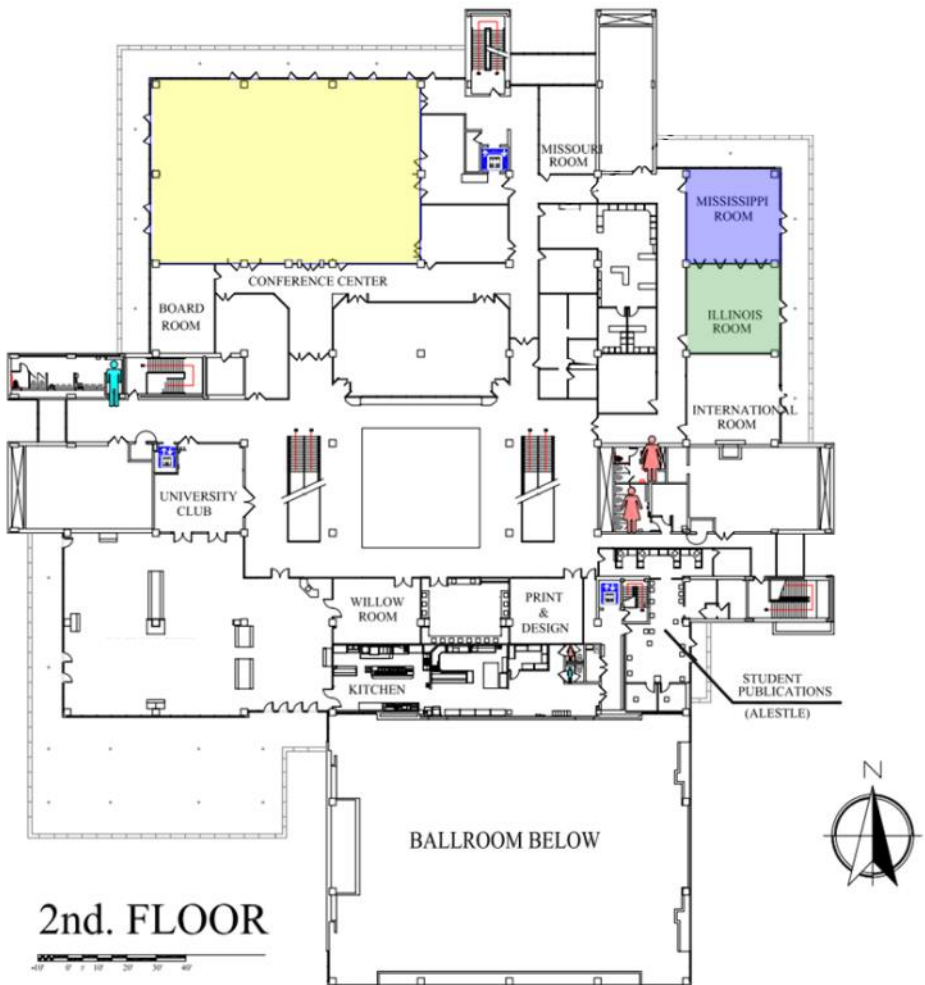
COUGARS

Morris University Center

**SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE**

Morris University Center

-  **Conference Center** - Poster Presentations and Project Demonstrations
-  **Mississippi Room** - Oral Presentations and Performances
-  **Illinois Room** - Oral Presentations



Plan of Events

**April 24, 2026, 9:00am to 12:00pm
Morris University Center**

Conference Center	Poster Presentations and Displays Project Demonstrations Presentation of Certificates to Senior Assignment Participants, Senior URCA Assistants, and Senior URCA Associates
Illinois Room	Oral Presentations
Mississippi Room	Oral Presentations and Performances

Southern Illinois University Edwardsville is proud to celebrate our Undergraduate Research and Creative Activities (URCA) Associates and Assistants, our Outstanding Senior Assignments as nominated by their faculty mentors, and the Community-Oriented Digital Engagement Scholars (CODES) presenters as they share the results of their academic work.



Undergraduate Scholars Showcase

Conference Center 9:00am-12:00pm

URCA Associate Poster Presentations

1. Yusra Amena, *Biological Sciences*

"Investigating the Synergistic Effects of Phage Therapy and Photodynamic Inactivation to Eliminate Pathogens"

2. Syeda Zunehra Banu, *Computer Science*

"Curriculum Driven Knowledge Graphs for Mapping Course and Topic Dependencies"

3. Adrian Davis, *Biological Sciences*

"Measuring the Effectiveness of Field Mice as a Vector for Seed Dispersal"

4. Abdulsalam Olat Odofin Kamorudeen, *Physics*

"Development of a Low Scaling Algorithm for Estimating Remaining Useful Life of Batteries"

5. Abigail Lewis, *Chemistry*

"Exploration of Caffeic Acid Derivatives in Ugi Reactions"

6. Alexander Patrick, *Biological Sciences*

"Validation and Time Trial of Noninvasive T3 and T4 Fecal Sampling in Mice"

7. Viola Stangle, *Biological Sciences*

"Assessing Reactive Oxygen Species Generation from Natural Organic Matter-Capped Nanoparticles"

8. Janel Straub, *Biological Sciences*

"A Comparison of the Apple SE and Garmin Forerunner 55 to Measure Steps in Free-Living and Controlled Lab Conditions"

9. Grace Witsken, *Biological Sciences*

"Foraging Behavior of Field Mice in Disturbed Natural Habitats"

10. Dillyn Wood, *Biological Sciences*

"The Effects of Riparian Area Vegetation on Crayfish Abundance"

URCA Assistant Poster Presentations

11. Brenden Auerbach, *Biological Sciences*

"Natural Organic Matter-Stabilized Nanoparticles as Antibacterial Agents: A Sustainable Alternative to Mass-Produced Nanoparticles"

URCA Assistant Poster Presentations

12. Erika Barrington, *Biological Sciences*
“Honeysuckle Juice, Leaf Litter Tea...Have We Lost the Plot: A Meta Analysis of Allelopathic Effects of Amur honeysuckle (*Lonicera maackii*)”
13. Benjamin Cole, *Physics*
“Holographic Grating Formation in Europium-Doped Barium-Tellurite Glass”
14. Giselle Espino, *Chemistry* and Addison Sutzer, *Chemistry*
“Using Charcoal-Strip Extraction with Gas Chromatography Mass Spectrometry to Identify Small Molecules Found in Simulated Sweat”
15. Deontai Gipson, *Mechatronics and Robotics Engineering*
“Low Cost Face Mask”
16. Torre Huffines and Brendan McElroy, *Environmental Sciences*
“Effect of Different Fertilizers on Selenium Volatilization in the Soil-Soybean System”
17. Grace Karolewicz, *Psychology*
“Preseason Pain And Athletic Coping Skill Comparisons Between Female Athletes”
18. Coree Keagy, *Anthropology*
“Deciphering 9th-Century Musical Notation in Old Saxon”
19. AnnaRose McManus, *Biological Sciences*
“Tailoring the Synthesis of Silver Nanoparticles for Chemosensing Applications”
20. Isabelle Melton and Jennifer Barker, *Exercise, Sport and Nutrition Sciences*
“Understanding The Female Athlete: Characterizing The Menstrual Cycle And Symptoms During Sport”
21. Ethan Nugen, *Chemistry*, Myles Brant and Emma Madden, *Biological Sciences*
“Using Dry ATR-FTIR Spectroscopy to Identify 1,4-Butanediol in Alcoholic Beverages”
22. Charles O'Neill, *Computer Engineering*
“YOLO Edge: Performance Analysis of YOLO Object Detectors on FPGA Accelerators”
23. Nathan Oliveira, *Physics*
“Studying the Formation of Persistent Holographic Grating in Praseodymium-doped Barium-Tellurite Glass”

Undergraduate Scholars Showcase

Conference Center 9:00am-12:00pm

URCA Assistant Poster Presentations

24. Glory Omole and Chloe Birchett, *Nursing*
"Psychological Safety in the Classroom: Effects on Nursing Student Well-Being & Academic Success"
25. Marques Rutlin, *Music*
"An Analysis of the Representation of HBCU Choirs at the American Choral Directors Association National Conference (1960-2025)"
26. Garrett Vanfossan, *Environmental Sciences*
"Determination of Altered Responses to Starvation Stress in DDT-Susceptible and -Resistant Strains of *Drosophila melanogaster*"
27. Victor Weltzin, *Anthropology*
"From Bones to Bytes: The implementation of 3D scans in biological anthropology"
28. John Western, *Biological Sciences*
"Auditing The Representation Of Female Basketball Athletes In Sports Medicine Research: Ankle Injury"

Outstanding Senior Assignment Poster Presentations

29. Nicole Anderson, Richard Smith, Valerie Rose, Carlos Villa, and Julia Pursell, *Applied Communication Studies*
"Managerial Communication and Culture"
30. Samantha Angelo, *Political Science*
"The Role of Social Media Polarization in Far-Right Radicalization in the United States"
31. Devin Beaty, Tricszjha Rose Escanela, Tyler Headen, and Macy Probst, *Civil Engineering*
"Ameren Pole Yard Design"
32. Aiden Bein, *Biological Sciences*
"Spatial Distribution of Horned Oak Galls Produced by *Callirhytis cornigera* on Pin Oaks (*Quercus palustris*) and Their Correlation With the Local Environment"
33. Ellyse Carter, Summer Carroll, Hannah Langlitz, Andrea Stupavsky, and Isabella Wender, *Early Childhood Education*
"Exemplar Field Inquiry, Investigation, and Play Projects from Future Early Childhood Educators"

Outstanding Senior Assignment Poster Presentations

34. Eric Churchill, Hayden Ott, Dylan Phegley, and Cameron Ramirez, *Civil Engineering*
“HSIP Grant Application For Roundabout”

35. Lily Daugherty, Jade Ferrell, Kayla Sanders, and Khristy Martinez, *Nutrition*
“How Specific Dietary Intakes Influence Hormone Regulation and Metabolism Across a Woman's Reproductive and Transitional Years”

36. Olivia Davila, *Mathematical Studies*
“An Exploration of Stochastic Interest Rates for Valuing Investments”

37. Madison Delgado, *Criminal Justice Studies*
“How Gun Violence and Gang Relations Shape Crime Patterns in Communities”

38. Christian Dowell, Fabian Ryans, Kyle Thomas, Kelsey Leerhoff, and Jason Bright,
Applied Communication Studies
“Workplace Culture Post Termination/Departure”

39. Grace Ferrarri, *Sociology*
“Hospital Environments and Cognitive Vulnerability: A Sociological Perspective on Dementia Care”

40. Alexis Guerra, Selina Jaramillo, Alexis Patterson, Arnas Sakenis, *Nutrition*
“Obstructive Sleep Apnea & Diet in Young Adults Increases Risk of Developing Chronic Disease”

41. Chloe LeBlanc, *Political Science*
“Socioeconomic Status and Support for Immigration in America”

42. Liv Lee, *Criminal Justice Studies*
“Understanding the Roots of Juvenile Delinquency: Socioeconomic and Family Influences in Prevention and Rehabilitation”

43. Jordan McNall, *Integrative Studies*
“Eyewitness Testimony and Memory Reliability”

44. Marissa Peter, *Mathematical Studies*
“A Study of Joint Life and Last Survivor Contingencies”

Undergraduate Scholars Showcase

Conference Center 9:00am-12:00pm

Outstanding Senior Assignment Poster Presentations

45. Emma Prott, *Environmental Studies*

"The Sedimentological Impact of Immigration Infrastructure on River Dynamics: Rio Grande at Eagle Pass, Texas"

46. Mohamed Saady, *Environmental Studies*

"Investigation of Chill Coma Recovery and Negative Geotactic Behavior in DDT-susceptible and -resistant Fruit Flies"

47. Amaya Tillerson, *Anthropology*

"What's Growing On: A Comparison Between Archaeobotanical Remains at the Scott Air Force Base Site"

48. Rachel Verduin, Brody Ketola, and Joyce Tawdros, *Applied Communications Studies*

"Relational Dialectics and Conflict Communication in First-Generational United States Families"

49. Clover Villanueva, *Environmental Sciences*

"Concentrations of Selenium in Draught Beers Commonly Consumed in the U.S."

50. Jett Volpi, Kaleb Kues, Mary Toothaker, Jaymz Young, and Keaton Smith, *Applied Communications Studies*

"Family Roles After Life Changes"

51. Landon Winkelman and Madilynn Rathert, *Biological Sciences*

"Nicotine, Alcohol, and Microbiome Modulation: Investigating Cross Tolerance in *Drosophila melanogaster*"

52. -

53. Henry Jones, Patrick Rawson, Rachel Roberston, Bridget Stock, and Caleb Robinson, *Mechanical Engineering*

"Carbon Fiber Seat with Integrated Ballast Box"

54. Danny Gerard, Sidney Glick, Ethan Segert, Jaden York, *Mechanical Engineering*

"Honey Dispenser"

Outstanding Senior Assignment Poster Presentations

55. Cole Bax, Cameron Bielke, Ryan Hughes, and James Wells, *Business Administration*

“Identify and Assess Cyber Vulnerabilities through Website Crawl”

56. Cole Sitton, Camren Brown, Jeff Brown, Bryon Ham, and Khang Luu, *Business Administration*

“AI Meeting Notetaker Software Evaluation”

Outstanding Senior Assignment Demonstrations

57. Gabirelle Woodruff, *Mass Communications*

“Exploring Femininity”

58. Grant McLean, *Electrical Engineering* and Devin Brodersen, *Computer Engineering*

“Breadboard”

59. Evan Wessel, Carl Mabrey, Jake Turner, *Electrical Engineering* and Devin Wilson, *Computer Engineering*

“Smart Pill Dispenser”

60. Taniah Pinkney, *Art and Design*

“Taniah Furniture Design”

Undergraduate Scholars Showcase

Mississippi Room 9:00 - 12:00

Outstanding Senior Assignment Presentations

9:00 Allison Szostak, Emmaleigh Donahoe, Gretchen Rybolt, Murphy Sweeney, and Sierra Storey, *Applied Communications Studies*
"Legacy PR: An Awareness Campaign for Alumni Players!"

9:15 Ciara Folkerts, Isabella Rivero, Jayson Evans, and Symphony Wilson, *Applied Communications Studies*
"Slate Strategies: A Public Relations Campaign for the Sparger Center for Performing Art"

9:30 Alex Maxie, Charles Drake, Gregory Thomas, Jaiden Bryant, and Nyah Marciano, *Applied Communications Studies*
"REACH PR: Organizing Community Day in East St. Louis for the SIU Office for Community Engagement"

9:45 Belle Blackorby, *History*
"Steeple Chase: Searching for the Origins of the Princess Hat in Fairy Tale Iconography"

10:00 Connor Kielty, *Theater and Dance*
"Scenic Design for The Great Gatsby"

10:15 Melina Huckelberry, *Theater and Dance*
"Lighting Design for Timeless Reflections- A Dance in Concert"

10:30 -Short Intermission-

Outstanding Senior Assignment Performances

10:45 Caley Micun, *Music*
"Clarinet performance: Grand Duo Concertante, op. 48 by Carl Maria von Weber"

11:00 Noah Mabb, *Music*
"Tuba performance: Nocturne by Franz Strauss"

Illinois Room

9:00 - 11:00

Community-Oriented Digital Engagement Scholar (CODES) Presentations

9:00 Aiden Martinez, *Geography*, Ava Gillery, *Civil Engineering*, Eriel Johnson, *Art and Design*, and Nikyra Wheaton, *Psychology*
“Jackie Joyner-Kersey Northern Campus Expansion”

9:15 Jada Parker, *Criminal Justice Studies*, JuJue Hill, *Art and Design*, Keith Hawkins, *Criminal Justice Studies*, Lindel Blount, *Accountancy*, Nadia Harris, *Nursing*, and Sa'Dae Cooper, *Criminal Justice Studies*
“*Environmental Justice in Cahokia Heights*”

9:30 Lyric Howard, *Electrical Engineering*
“Community Engagement With the Improvement of Trees”

9:45 Ayiana Baynes, *Theater and Dance*, Isaiah Otey, *International Studies*, Jaiden Deboe, *Biological Sciences*, Jasmine Davis, *Mass Communications*, Laylah Leech, *Public Health*, Samuel Lee, *Philosophy*, and Zuleyri Medina-Campos, *Political Science*
“Engaging Young Adults in Conservation”

10:00 Alexandra Guerrero (Public Health), Justin Richerson (Biological Sciences), Marques Rutlin (Music), Payton Plummer (Business Administration), Sonia Sheryr (Biological Sciences), and Tamiria Dixon (Social Work)
“Empowering Change Through Water Education”

Outstanding Senior Assignment Presentations

10:15 Nathan Oliveira (*Physics*)
“Studying the Formation of Persistent Holographic Grating in Praseodymium-doped Barium-Tellurite Glass”

10:30 Aidan Keen (*Mass Communications*)
“PROXY short film”

URCA Associates

An URCA Associate position is a year-long position in which a student designs their own research or creative activity project and then works with a mentor to see it through. Associates are required to attend monthly meetings and to present their scholarly work at the Spring Symposium. Associates earn a stipend and can also receive money for project-related equipment and travel.

A maximum of 10 students are accepted into this program each year.

2025-2026 Associate Class

Yusra Amena

Biological Sciences

Mentor: Dr. Andres Durantini

Syeda Zunehra Banu

Computer Science

Mentor: Dr. Gunes Ercal

Adrian Davis

Biological Sciences

Mentor: Dr. Danielle Lee

Abdulsalam Olat Odofin Kamorudeen

Physics and Applied Mathematics

Mentor: Dr. Nima Ltfofi

Abigail Lewis
Biochemistry
Mentor: Dr. Sarah Luesse

Alexander Patrick
Biological Sciences
Mentor: Dr. Cinnamon VanPutte

Viola Stangle
Biological Sciences
Mentor: Dr. Femi Adegboyega

Janel Straub
Exercise Science
Mentor: Dr. Bryan Smith

Grace Witsken
Biological Sciences
Mentor: Dr. Danielle Lee

Dillyn Wood
Biological Sciences
Mentor: Dr. Thomas Anderson

URCA Award Winners

These awards are given each semester to students and faculty in the Undergraduate Research Creative Activity Assistant Program. The winners for the awards for the Fall 2025 and Spring 2026 semesters are as follows:

Fall 2025 Winners

URCA Research-Based Mentors of the Semester

Dr. Jason Finley
Department of Psychology

Dr. Markus Nauroth
*Department of Computer Science
and Informational Systems*

URCA Research Assistant of the Semester

Emma Prott
On behalf of Geography

URCA Creative Activities Assistant of the Semester

Ella Young
On behalf of Theater and Dance

Spring 2026 Winners

URCA Research-Based Mentor of the Semester

Annie Imboden
School of Nursing

URCA Creative Activity-Based Mentor of the Semester

Abbey Hepner
Department of Art and Design


URCA Research Assistant of the Semester

Gavynn Baer
Speech Pathology and Audiology

URCA Creative Activities Assistant of the Semester

Hannah Asbeck
Art and Design





The Office of the Provost and Vice Chancellor of Academic Affairs is proud to sponsor the Undergraduate Scholars Showcase. The Showcase was designed to highlight the depth and variety of the Senior Assignment program at Southern Illinois University Edwardsville. Each department or program was asked to award its top Senior Assignment projects with the Outstanding Senior Assignment Award. Students receiving this honor were asked to participate in the 2025-2026 Undergraduate Scholars Showcase.

**Thank you for your support of the
Southern Illinois University Edwardsville
Undergraduate Scholars Showcase!**

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