

WELCOME TO URAC 2025!

Westminster College is proud to host the 2025 Undergraduate Research and Arts Celebration! There are hundreds of scholars, scientists, artists, performers, and directors that call Westminster College home and today, we celebrate all of their work. This year's celebration features the work of more than 300 Westminster students from all over campus. This is an incredible achievement, and it's one every Titan should be proud of. When you're standing in a group with four Westminster students, at least one is probably presenting at URAC! Their work represents every walk of academic life, from poems written by students in their first semester on campus, to seniors presenting the capstone work that they've worked on for multiple years and countless hours.

The Westminster College mission statement includes eight essential outcomes: to reason logically and evaluate critically; to communicate effectively; to think creatively and appreciate aesthetic expressions; to demonstrate intellectual curiosity; to acquire knowledge of self, society, human cultures, the natural world, and human relationships to God; to apply knowledge to contemporary issues; to demonstrate moral and ethical commitments to neighbor, society, and the natural world; and to demonstrate commitment to lifelong learning and the acquisition of skills for careers and responsible service as world citizens. The student work being presented, performed, and displayed today embodies all of these outcomes and is a testament to the value of a Westminster education.

Creating something is difficult, and today's participants will tell you that everything you see today-- each graph, poem, film frame, data figure, and musical note-- is the result of hours of practice, countless drafts, and late nights in the lab to get the experiment just right. Because of this hard work, the 2025 URAC participants are excited to share their work with you. I am proud of these students for this work, and for the courage it takes to share this work with the community.

These artists, performers, and scholars could not have carried out these projects by themselves; behind each project there are Westminster College faculty, staff, administration, and campus offices that helped the students each step of the way. Back home and in dorm rooms there are friends, siblings, and parents who supported these researchers. I want thank everyone for providing this support and giving our students the opportunity to shine today.

Just as the work of our students is not an individual effort, URAC would not be possible without the effort of a group of people from across campus that includes student workers, Academic Administrative Assistants, and the Undergraduate Research Advisory Council, a group of dedicated faculty involved in every aspect of planning, coordinating, and staging URAC. Today's celebration could not happen without their efforts and I am deeply grateful for their help.

I hope you enjoy today's events! Thank you for attending the Undergraduate Research and Arts Celebration.

Patrick E. Lackey

Patrick E. Lackey Director, Drinko Center for Undergraduate Research

TEQUSINVOURPOSTSHI

Follow us Quicurac QUIESTILIESTERDEN

SCRAWL 2025 RELEASE TABLE Cultural Center

WHERE THEY ARE FROM: A POETRY COLLECTION BY THE CLASS OF 2028 Quad

POSTER SESSION A Witherspoon Rooms

9 AM-4 PM

9:45-10 AM

10-10:45 AM

10-11:20 AM

11-11:15 AM

11-11:45 AM

11 AM-12 PM

12-1 PM

12:30-1 PM

11:45 AM-12:00 PM

11:20 AM-12:20 PM

10-11 AM

9-10 AM

THE TRUMPET TROUPE McKelvey TUB

RESEARCH ROUNDTABLE Patterson 106

HOW TO GET STARTED IN RESEARCH Berlin Lounge

WESTMINSTER TRAVEL EXPERIENCES Cultural Center

CONCURRENT ORAL PRESENTATIONS Patterson 1st/2nd Floor

THE WESTMINSTER COLLEGE TROMBONE COMPANY McKelvey TUB

VIDEO SCREENINGS Mueller Theater

CHAMBER SINGERS PERFORMANCE McKelvey TUB

POSTER SESSION B Witherspoon Rooms

SCRAWL RELEASE PARTY Cultural Center

ART DISPLAY Outside Foster Art Gallery

FEATURED PODIUM PRESENTATION SPEAKERS Mueller Theater and Facebook Live

ART GALLERY TALK Foster Art Gallery

POSTER SESSION C Witherspoon Rooms

ART DISPLAY Third Floor Atrium, McKelvey

RESEARCH ROUNDTABLE Patterson 106

CONCURRENT ORAL PRESENTATIONS Patterson 1st/2nd Floor

POETRY SLAM Cultural Center

PULSE AND PASSION: PERCUSSION ENSEMBLE Orr Auditorium

PUBLIC SPEECHES Berlin Lounge

RESEARCH ROUNDTABLE Patterson 106

FEATURED PODIUM PRESENTATION SPEAKERS Mueller Theater and Facebook Live

POSTER SESSION D Witherspoon Rooms



RA

1-2 PM 1:15-2 PM 1:30-2:50 PM

2 PM-3 PM

3-3:45 PM

3-4 PM

2:20-2:50 PM

2:30-4 PM



Poetry Slam at URAC!

Hosted by SCRAWL & Sigma Tau Delta

April 23rd | 2:00pm Cultural Center Join us for a friendly poetry competition!



URAC-2025 RESEARCH EXPERIENCE PANEL GETTING STARTED IN RESEARCH

BERLIN LOUNGE 10–11 AM

Come hear students from a variety of majors and class standings talk about how they got started in research and share their experiences in a variety of research projects!!

Attendees will have the opportunity to ask the panelists questions!

PANELISTS:

Haley Bell	Zack LaFrankie	Addison Lenz
Sophomore	Senior	Senior
English	Physics and Math	Early Childhood/Special Education
Luvada Mayle	Talia Morgenstern	Rhett Sanderson
Senior	Junior	Senior
Psychology	Molecular Biology	Materials Science



UNDERGRADUATE RESEARCH AND ARTS CELEBRATION

CALING ALL STUDENTS AND ATTENDES!! We want to hear from you!!





SCAN HERE TO TAKE

THE SURVEY!!

COMPLETE THE URAC EXPERIENCE SURVEY BY FRIDAY, May 2nd to be entered for a chance to win a \$25 Sheetz Gift Card!

DO YOU WANT TO WIN A \$25 Sheetz Gift Card?

URAC-2025 POSTER PRESENTATIONS

Witherspoon Rooms

URAC-2025 POSTER PRESENTATIONS

POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR	
ESSI	ON A — 9-10 AM			
A1	Creative, Collaborative, Community: Uniting Town and Gown for A Better Tomorrow	Ashlee Douglass, Talia Kosonovich, Katelyn Kerr, Elysia Morris, Macaria Benjamin, Deja Keo, Gianna DiCerbo, Nereida Arzola-Mora, Chloe Brodison-McMinn, Marlowe Frelin, Maura Mahoney, Hannah Plowman, Nicholas Vitale	Helen Boylan	3
A2	Feared Possible Selves as a Mod- erator Between OCD Symptoms and Functional Impairment	Allison Augustine	Jessica Rhodes	
A3	ECO 380 Simulated Stock Portfolio Project	Jacob Auchter, Lainee Puhl, Loren Waldo, Jacob Baumgart	Jennifer Waldo	
A4	Prevalence of Needlestick and Sharps Injuries Among Nurses in a Healthcare Setting	Mackenzie Avery	Joni Darby	Į
A5	3' exoribonuclease 1's Binding Affinity for Histone mRNA Stem- Loop Degradation Intermediate Sequences	Mason Baldwin	Patrick Lackey	
A6	Stress Levels and Coping Styles in Westminster College Students	Ashlyn Brown	Loreen Huffman	Ţ
A7	SkimStones- Website Design & Development	Ethan Burford, Keenan Heeter, Sebastian Dinardo, Jacob Miller	Jennifer Waldo	
A8	The adverse effects of butylparaben and methylparaben exposure on the cardiovascular system of zebrafish embryos	Natalie Calvert	Marosh Furimsky	
A9	Market Watch Investment Simulation	Christopher Davis, Chase Thomas, Alexander Hough, Christian Latone	Jennifer Waldo	
A10	The Effect of Beta-Hydroxy- Beta-Methylbutyrate on mTOR Expression During Limb Regeneration	Lucas Esqueda	Joshua Corrette-Be	nnett
A11	Multinational Trade in India	Ryan Feth, Christopher Davis, David Kelly	Jennifer Waldo	







POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR
A12	Aging in the Digital Spotlight: How Social Media Shapes Perceptions of Growing Older	Marlowe Frelin	Loreen Huffman
A13	Acute Cocaine Withdrawal Effects on Avoidance Learning in Male and Female Rats	Savannah Furlong	Deanne Buffalari
A14	Financing a Multinational Company	Ryan Gibbons, Quinn Morrow, Gino Piraino	Jennifer Waldo
A15	Improving Pain Reassessments with Visual Reminders	Elizabeth Grove	Maria Sapienza
A16	Phosphorescence Quantum Yield of Lanthanide Based Complexes using Highly Conjugated Ligand Systems	Dominic Guiffre	Pete Smith
A17	Identification of bacterial species in brass instruments using 16s rDNA PCR	Emily Hipolito	Joseph Balczon
A18	Investigating the spatial repellency effects of two plant- based compounds compared to DEET in the disease vector Aedes albopictus	Aidan Johnston	Diana Ortiz 👔 📢
A19	Public Memory: The Suffragist Statue in Central Park	Ethan Kurtz, Cassady Ellsworth, Ethan Schohn, Brady Page	Angela Lahr 🧿 📢
A20	Examining the Effect of Nature Therapy on Emotion Regulation	Emma Little	Jessica Rhodes
A21	Red, White, & Travel	Dylan Llewellyn, Dante Compagni, Mason Manos	Jennifer Waldo
A22	A Special Education Experience for Pre-Service Student Teachers	Sydney Lokay, Sarah Eisenhuth	Emily Mazzant
A23	Public Memory: Pittsburgh Stephen Foster Statue	Maura Mahoney, McKenzie Kessler, Harlan Burtner, Madison Syka, Brady Robison	Angela Lahr
A24	Sweet as Honey: How Seasonal Factors Affect Antioxidant Content Within Honey	Emily Marchlewski	Jessica Sarver 🕥 📢
A25	Public Memory: The Valley of The Fallen	Morris, Alexander Dominick, Alexander Rothwell, Kaleb Kuhn	Angela Lahr

POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR
A26	Public Memory: Comfort Women Statues	Tyler Parsons, Ian Evans, Cameron Lafayette, Christina Loewe	Shannon Smithey
A27	Outsourcing Service Work to India using a US-Based Multinational Corporation	Ron Whitehouse, Colin Bork, Colin Fabich	Jennifer Waldo

B1	Creative, Collaborative,	Ashlee Douglass, Talia Kosonovich,	Helen Boylan	\sim
Ы	Community: Uniting Town and Gown for A Better Tomorrow	Katelyn Kerr, Elysia Morris, Macaria Benjamin, Deja Keo, Gianna DiCerbo, Nereida Arzola-Mora, Chloe Brodison-McMinn, Marlowe Frelin, Maura Mahoney, Hannah Plowman, Nicholas Vitale		Ì
B2	Novel Stripping Methods for Sustainable Lithium Solvent Extraction	Ellian Ascencio	Pete Smith	X
B3	The Effects of Nicotine on Painful and Aversive Stimuli	Isabella Barnabei	Deanne Buffalari	
В4	Neurogenesis in Down Syndrome: A Review of Pharamacological Treatments and Ethical Considerations	Vince Belice	Loreen Huffman	Ţ
B5	Improving Communication between Nurses During Handoff	Sara Bubb	Joni Darby	Ţ
B6	Exploring the Connections between Spillover Effect, Secondary Traumatic Stress, and Post-Traumatic Growth in Mental Health Workers.	Bella Buettner	Loreen Huffman	Ţ
B7	Investment Simulation Report	Ethan Burford, William Levak, Angelina Nardone, Xavier McDonald	Jennifer Waldo	
B8	Detecting and Quantifying Beet Syrup in Multifloral Honey Using IR Spectroscopy and Multivariate Analysis	Zach Burghgraef	Erin Wilson	

POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR
B9	PixelHaven Ecommerce Marketing Platform Research	Jay Corey, Brandon Jennings, DeMere White, William Hess, Jay Corey	Jennifer Waldo
B10	Fall Prevention Education in Older Adults	Taylor Dlugozima	Joni Darby 🦪
B11	Market Watch Investing Game	Colin Fabich, Alexander Williams, Bryan Roselli, Ryan Roselli	Jennifer Waldo
B12	Primary Election Types and Their Impacts on Congressional Voting	Erin Fosgreen	Michael Aleprete
B13	Enduro-Ring	Gia Francisco, Amanda Lewis, Natalie Vilchek, Alessandra Zer- vanos	Jennifer Waldo
B14	Investigating the Impact of the enzyme Monoamine Oxidase on Aggression in Zebrafish	Lily Hefner	Marosh Furimsky
315	What is the efficacy of Piper nigrum extract as a repellent on the feeding behaviors of female Aedes albopictus?	Matthew Howard	Diana Ortiz
316	Factors Associated with COPD and CHF Exacerbation and Reducing Readmission Risk.	Marissa Samantha Jimenez	Joni Darby
317	Public Memory: King Leopold II	Benjamin Kelly, Cheyenne Burgos, Joshua Reed, Kayleigh Stinedurf	Shannon Smithey
318	Sluggish Cognitive Tempo as a Moderator between Attention Deficit/Hyperactive Disorder and Depression	Amber Krebs	Jessica Rhodes
819	Family Dynamics: Outcomes of Resilience and Socioemotional Development of Single-Parent and Two-Parent Households	Nayana Lukus	Loreen Huffman 🦪
B20	An Examination of the Mediating Role of Emotional Impulsivity in the Relationship Between ADHD Symptoms and Nicotine Consumption in College Students	Mia Meholick	Jessica Rhodes





POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR	
B21	ZAPZ Golf (Website design and development)	Zach Meszaros, Brady Page, Zachary Reid, Anthony Trella	Jennifer Waldo	
B22	The New Front Porch	Shea O'Donnell Stephen Antuono, Colin Bork, Braden Bosco, Brice Butler, Dante Compagni, Christopher Davis, Tarell Hefflin, Brooke Horvath, Jackson Lawrence, Amanda Lewis, Evan Lewis, Jadyn Malizia, Mason Manos, Brody McGuinness, Morgan Murphy, Shea O'Donnell, Andy Oberdick, Tyler Parsons, Eva Semieraro, Alex Shaughnessy, Michael Tokar, Joseph Trudeau, Jalen Washington, Ron Whitehouse, Kevin Wright	Eric Gaber	
B23	Stryv	Chalmer Ritzert, Anna- Katherine Davis, Alyjah McHugh, Justin Wypasek	Jennifer Waldo	Į
B24	Understanding Artificial Intelligence in Education	Alexis Shiderly, Adison Lenz, Alaina Moore	Emily Mazzant	
B25	Effects of levonorgestrel on zebrafish development	Danielle Teasdale	Marosh Furimsky	
B26	The Effects of Physical and Psychological Stress on Sucrose Consumption in Male and Female Rats	Ryleigh Valone	Deanne Buffalari	
B27	Improving Patient Education on Cardiac Catheterizations	Elizabeth Reed	Joni Darby	Į







ENVIRONMENTAL PRIZE CANDIDATE

A.

NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR	
SESSI	ON C — 1-2 PM			
C1	Creative, Collaborative, Community: Uniting Town and Gown for A Better Tomorrow	Ashlee Douglass, Talia Kosonovich, Katelyn Kerr, Elysia Morris, Macaria Benjamin, Deja Keo, Gianna DiCerbo, Nereida Arzola-Mora, Chloe Brodison-McMinn, Marlowe Frelin, Maura Mahoney, Hannah Plowman, Nicholas Vitale	Helen Boylan	I
C2	Exploring the Impact of Adult ADHD with Comorbid Oppositional Defiant Disorder on Functional Impairment and Criminal Justice System Involvement	Lydia Ohm	Jessica Rhodes	
C3	The Effectiveness of Mindfulness on Nurse Burn-Out	Zoe Burkett	Joni Darby	Ì
C4	Effects of caffeine on risk-taking behaviors in decision-making tasks	Hannah Coleman	Eric Fields	Ţ
C5	Meningococcal B Vaccine	Abbigail Dickie	Joni Darby	Z
C6	Identifying the chemical composition of kombucha tea	Gabriela Garza	Jessica Sarver	
C7	Co-abuse of Nicotine and Ethanol: Effects on Working and Long-Term Memory Driven by Appetitive vs Aversive Stimuli	Abigail Guiste	Deanne Buffalari	
C8	New View of School: A Student's Perspective on Student Engagement	Dalton Hamm	Emily Mazzant	
С9	Sex differences in the antidepressant efficacy of 5HT agonist	Ella Hildebrand	Deanne Buffalari	
C10	An Examination of Motivation and Personality in Young and Older Adults	Ava Houy	Loreen Huffman	Ì
C11	Understanding the Role of 3'hExo in mRNA Histone Degradation Using Molecular Dynamic Simulations	Gabriella Hunter	Patrick Lackey	
C12	Multinational Corporations Manufacturing in Foreign Markets	Brandon Jennings, Xavier McDonald, Jalen Washington	Jennifer Waldo	

POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR
C13	Phytoremediation of Lead and Root Foraging Avoidance of Catnip, Nepeta cataria	Christine Rose Karn	Ann Throckmorton
C14	Nature Therapy at Westminster College	Emma Little	Jessica Rhodes 🧿
C15	The effect of β -hydroxy β -methylbutyrate (HMB) on rate of axolotl limb regeneration and digit formation	Sara MacMurdo	Joshua Corrette-Bennet
C16	Memetic Rhetoric in Marketing	Alyjah McHugh	Eric Gaber
C17	Multi-National Company Analysis: Germany Pure Glas Product	Peyton Mele, Stephen Antuono, Angelina Nardone	Jennifer Waldo
C18	The impact of HMB on fgf8 expression levels during Ambystoma mexicanum limb regeneration	Alondra Melendez	Joshua Corrette-Bennet
C19	DIY Auto Titrator	Charlie Moller	Erin Wilson
C20	Ecommerce website poster presentation	Quinn Morrow, Christopher Rotiroti, Jaxon Hendershott, Drew Weir	Jennifer Waldo
C21	Website Development of E-commerce	Peyton Pauline	Jennifer Waldo
C22	Impact of Attending the Pennsylvania Intercollegiate Band Festival	Shelby Rebecca Pocono, Shannon Witkouski, Benjamin Burke, Timothy Mulcahy, Shawn Redmond, Morgan Ross	Aaron Himes
C23	Innovation Meets Finance: Simulation of a Singaporean FinTech Startup Company in Today's Global Market	Mackenzie Powell, Morgan Murphy, Conner Roberts	Jennifer Waldo
C24	Canadian Travel Agency	Ashly Roa, Jonas Clark,Gavin Jones	Jennifer Waldo
C25	Preventing Falls in the Dementia Population	Brooke Terwilliger	Joni Darby 🧿 📢
C26	Bone Deep: A Clean Sweep of an American Alligator Skull	Kevin Walker	John Robertson
C27	Mental Imagery, Emotional Valence, and Item vs. Associative Effects on Memory	Makyla Wheeler	Eric Fields





NUMBE	R TITLE	RESEARCHER(S)	FACULTY SPONSOR	
SESS	ON D — 3 PM-4 PM			
D1	Creative, Collaborative, Community: Uniting Town and Gown for A Better Tomorrow	Ashlee Douglass, Talia Kosonovich, Katelyn Kerr, Elysia Morris, Macaria Benjamin, Deja Keo, Gianna DiCerbo, Nereida Arzola-Mora, Chloe Brodison-McMinn, Marlowe Frelin, Maura Mahoney, Hannah Plowman, Nicholas Vitale	Helen Boylan	I
D2	Ethanol Exposure Impacts: Cardiac Development and Function in Zebrafish	Lauren Gross	Marosh Furimsky	Ţ
D3	The Affect of Cannabis on Working Memory in Relation to Stress	Nydia Johnson	Deanne Buffalari	Ţ
D4	Public Memory: The Recent Debate Over the Presentation of History at James Madison's Montpelier	Amanda Lewis, Justin Ranft, Charles Stapleton, Harleigh Bishop, Cade Hancox	Shannon Smithey	
D5	Why Did the Populist Party in Poland Lose?: A Comparative Case Study of Populism in Poland and Hungary	Christina Loewe	Michael Aleprete	
D6	Effect of Nicotine on Chronic Stress Induced Working Memory Deficits	Luvada Mayle	Deanne Buffalari	
D7	Public Memory: Cecil Rhodes	Deshaun Michael Mcbryde, Gabriel Martinez, Sophia Klonowski, Trent Davey, Thomas Rook	Angela Lahr	
D8	American Model United Nations Conference	McKenzie Means, Sarah Anil Che- rian, Olivia Plummer, Ryan Criss- man, Sophia Klonowski, Christina Loewe, Hayden Kenny, Lucas Crow, Marayna Sanders, Na- than Barber, Tyler Hager, Victoria Valcarcel Matos, Wesley Yeager, Lily Hefner, Chloe Brodison-McMinn, Joshua Furman	Michael Aleprete	
D9	Evaluating the Inhibitory Potential of Xylitol on Oral Biofilm Formation in Cariogenic Conditions	Anita Panatch	Joseph Balczon	Į

POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR
D10	Probing Membrane Binding of Alpha-synuclein Using Double Histidine Cu(II) Labeling And Electron Spin Resonance Spectroscopy	Ethan Moore, Kevin Walker	Jessica Sarver
D11	Entrepreneurship in Action with the Westminster Bee Company	Quinnlyn Reaver, Brody McGuin- ness, Shea O'Donnell, Abigail Painter, Nicholas Vitale, Tyler Young	Helen Boylan
D12	Analysis of Hexavalent Chromium in Drinking Water at Westminster College	Jamie Robertson	Ann Throckmorton
D13	Language Learning App in Guatemala	Bryan Roselli, Ryan Roselli,Tarell Hefflin	Jennifer Waldo
D14	Effect of siRNA knockdown of the icaA and icaD genes on biofilm formation in Staphylococcus aureus	Lyddia Rougeux	Joshua Corrette-Bennet
D15	Phone Essentials / E-commerce Marketing	lan Runyan, Dylan Snyder, Jacob Lapinski, Kaydin Brown	Jennifer Waldo
D16	E-Commerce: Grit Gear Apparel Website Design	Tyler Salvatore, Christopher Davis, Connor Schmidt, Chase Thomas	Jennifer Waldo
D17	Alcohol abuse through adulthood	Gwenyth Sernulka	Loreen Huffman
D18	Unraveling the Impacts of Temperature on Zebrafish (Danio rerio) Embryonic Development	Sara Swanson, Harmony Wilson	Marosh Furimsky
D19	Electric Vibes: Gliding Through the Streets	Lucas Toohey, Michael Phillips, Ethan Croushore	Jennifer Waldo
D20	Vivir	Alexa Tovarnak, Anette Aryee, Caleigh Tack, Nathaly Gomez Espinoza	Jennifer Waldo
D21	Nicotine Reduction of Sucrose Consumption in Male and Female Rodents	Mackenzie Wagner, Morgan Juskowich	Deanne BuffalariTennan
D22	Personality Traits and College Majors	Brianna Wetzel	Loreen Huffman

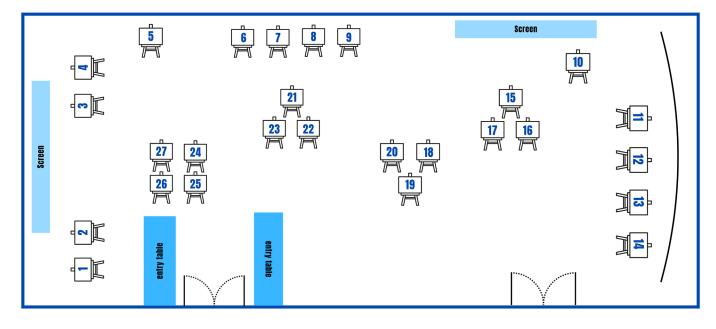




POSTER NUMBER	TITLE	RESEARCHER(S)	FACULTY SPONSOR
D23	MarketWatch Simulation Stock Portfolio	Ron Whitehouse, Nathaniel Philips, Ethan Croushore, Carter Haniford	Jennifer Waldo
D24	The Effects of Patient Education on Adherence to Medication Reconciliation in Dialysis Patients	Mackenzie Wigley	Joni Darby
D25	Effectiveness of Brine in Aluminum-Air Batteries	Joseph Wright	Pete Smith
D26	Reducing Hair Contamination in Surgical Instrument Trays: A Quality Improvement Initiative	Jacob Ratcliff	Joni Darby
D27	Public Memory: J. Marion Sims	Haley Bell, Phoebe Schultz, Gino Pirano, James Lafferty, Josh Furman	Angela Lahr



POSTER SESSION MAP



INDEX OF POSTER PRESENTERS

PRESENTER	POSTER #	PRESENTER	POSTER #	PRESENTER	POSTER #
Stephen Antuono	B22,C17	Emily Hipolito	A17	Nathaniel Philips	D23
Annete Aryee	D20	Brooke Horvath	B22	Michael Phillips	D19
Nereida Arzola-Mora	A1,B1,C1,D1	Alexander Hough	A9	Gino Piraino	A14, D27
Ellian Ascencio	B2	Ava Houy	C10	Hannah Plowman	A1,B1,C1,D1
Jacob Auchter	A3	Matthew Howard	B15	Shelby Pocono	C22
Allison Augustine Mackenzie Avery	A2 A4	Gabriella Hunter Brandon Jennings	C11 B9,C12	Mackenzie Powell Lainee Puhl	C23 A3
Mason Baldwin	A4 A5	Marissa Jimenez	B16	Justin Ranft	D4
Isabella Barnabei	B3	Nydia Johnson	D3	Jacob Ratcliff	D26
Jacob Baumgart	A3	Aidan Johnston	A18	Quinnlyn Reaver	D11
Vince Belice	B4	Gavin Jones	C24	Shawn Redmond	C22
Haley Bell Macaria Poniamin	D27 A1,B1,C1,D1	Morgan Juskowich Christine Karn	D21 C13	Elizabeth Reed Joshua Reed	B27 B17
Macaria Benjamin Harleigh Bishop	АТ, БТ, СТ, DT D4	Benjamin Kelly	B17	Zachary Reid	B21
Colin Bork	A27,B22	David Kelly	A11	Chalmer Ritzert	B23
Braden Bosco	B22	Deja Keo 🏾	A1,B1,C1,D1	Ashly Roa	C24
Chloe Brodison-McMinn		Katelyn Kerr	A1,B1,C1,D1	Conner Roberts	C23
Ashlyn Brown	A6	McKenzie Kessler	A23	Jamie Robertson	D12
Kaydin Brown Sara Bubb	D15 B5	Sophia Klonowski Talia Kosonovich	D7 A1,B1,C1,D1	Brady Robison Thomas Rook	A23 D7
Bella Buettner	BG	Amber Krebs	B18	Bryan Roselli	B11,D13
Ethan Burford	A7,B7	Kaleb Kuhn	A25	Ryan Roselli	B11,D13
Ethan Burford	B7	Ethan Kurtz	A19	Morgan Ross	C22
Zach Burghgraef	B8	Cameron Lafayette	A26	Alexander Rothwell	A25
Cheyenne Burgos	B17	James Lafferty	D27	Christopher Rotiroti	C20 D14
Benjamin Burke Zoe Burkett	C22 C3	Jacob Lapinski Christian Latone	D15 A9	Lyddia Rougeux Ian Runyan	D14 D15
Harlan Burtner	A23	Jackson Lawrence	B22	Tyler Salvatore	D15 D16
Brice Butler	B22	Adison Lenz	B24	Connor Schmidt	D16
Natalie Calvert	A8	William Levak	B7	Ethan Schohn	A19
Jonas Clark	C24	Amanda Lewis	B13,B22,D4	Phoebe Schultz	D27
Hannah Coleman	C4 A21,B22	Evan Lewis Emma Little	B22 A20,C14	Eva Semieraro	B22 D17
Dante Compagni Jay Corey	B9	Dylan Llewellyn	A20,014 A21	Gwenyth Sernulka Alex Shaugnessy	B22
Ethan Croushore	D19,D23	Christina Loewe	A26,D5	Alexis Shiderly	B24
Trent Davey	D7	Sydney Lokay	A22	Dylan Snyder	D15
Christopher Davis	A9, A11,B22,D16	Nayana Lukus	B19	Charles Stapleton	D4
Anna-Katherine Davis	B23	Sara MacMurdo	C15	Kayleigh Stinedurf Sara Swanson	B17 D18
Gianna DiCerbo Abbigail Dickie	A1,B1,C1,D1 C5	Maura Mahoney Jadyn Malizia	A1,A23,B1,C1,D1 B22	Madison Syka	A23
Seastian Dinardo	A7	Mason Manos	A21,B22	Caleigh Tack	D20
Taylor Dlugozima	B10	Emily Marchlewski	A24	Danielle Teasdale	B25
Alexander Dominick	A25	Gabriela Martinez	D7	Brooke Terwilliger	C25
Ashlee Douglass	A1,B1,C1,D1	Luvada Mayle	D6 D7	Chase Thomas	A9,D16
Sarah Eisenhuth Cassady Ellsworth	A22 A19	Deshaun Mcbryde Xavier McDonald	D7 B7,C12	Michael Tokar Lucas Toohey	B22 D19
Lucas Esqueda	A10	Brody McGuinness	B22,D11	Alexa Tovarnak	D20
lan Evans	A26	Alyjah McHugh	B23,C16	Anthony Trella	B21
Colin Fabich	A27,B11	McKenzie Means	D8	Joseph Trudeau	B22
Ryan Feth	A11	Mia Meholick	B20	Model UN Dulaigh Valena	D8
Erin Fosgreen Gia Francisco	B12 B13	Peyton Mele Alondra Melendez	C17 C18	Ryleigh Valone Natalie Vicheck	B26 B13
Marlowe Frelin	A1,A12,B1,C1,D1	Zach Meszaros	B21	Nicholas Vitale	A1,B1,C1,D1,D11
Savannah Furlong	A13	Jacob Miller	A7	Mackenzie Wagner	D21
Josh Furman	D27	Charlie Moller	C19	Loren Waldo	A3
Gabriela Garza	C6	Ethan Moore	D10	Kevin Walker	C26,D10
Ryan Gibbons Nathaly Gomez Espinoza	A14	Alaina Moore Gabriella Morris	B24 A25	Jalen Washington Drew Weir	B22,C12 C20
Lauren Gross	D2	Elysia Morris	A25 A1,B1,C1,D1	Brianna Wetzel	D22
Elizabeth Grove	A15	Quinn Morrow	A14,C20	Makyla Wheeler	C27
Dominic Guiffre	A16	Timothy Mulcahy	C22	DeMere White	B9
Abigail Guiste	C7	Morgan Murphy	B22,C23	Ron Whitehouse	A27,B22,D23
Dalton Hamm	C8	Angelina Nardone	B7,C17	Mackenzie Wigley	D24
Cade Hancox Carter Haniford	D4 D23	Andy Oberdick Shea O'Donnell	B22 B22,D11	Alexander Williams Shannon Witkouwski	B11 C22
Keenan Heeter	A7	Lydia Ohm	C2	Harmony Wilson	D18
Tarell Hefflin	B22,D13	Brady Page	A19,B21	Joseph Wright	D25
Lily Hefner	B14	Abigail Painter	D11	Kevin Wright	B22
Jaxon Hendershott	C20	Anita Panatch	D9	Justin Wypasek	B23
William Hess Ella Hildebrand	B9 C9	Tyler Parsons Peyton Pauline	A26,B22 C21	Tyler Young Alessandra Zervanos	D11 B13
		r cyton i aunne		MICSSAIIUIA ZEI VAIIUS	CIC

ORAL PRESENTATIONS & URAC-2025 RESEARCH ROUNDTABLES

Mueller Theater & Patterson Hall

PATTERSON FIRST AND SECOND FLOORS

CONCURRENT MORNING SESSIONS - 10-11:20 AM

Yinz Pay How Much? Ryan Feth	Fast Realtime 3D Graphics Alternatives Declan Catterall, Lucas D'Angelo	ASB Conference Case Study Presentation Gia Francisco, Kimberly Cora	The Tucker Automobile Club of America and Historic Memory Erin DaRe
Love and War: Helena's Honor in the Trojan War Charlie Barefield	Till Debt Do Us Part Gabrielle DiDolce, Kaya Skinner, Samuel Duda	Data Analytics: A study of New Wilmington Weather and the Generation of Energy from the Tiny House Solar Array Matthew Kane	Albert Speer: Defense at Nuremberg and What it Means for Humanity in the Future Hayne Webster
Understanding Decision-making: Can Individual Differences Predict Dominant Decision-making Styles? Ashlee Douglass	Calculating the Distance of an Indoor Shotput Throw Using Computer Vision Rachel Brady	S&Peace of Mind: Investing for Retirement Gavin Jones, Logan Kuntz	



PATTERSON FIRST AND SECOND FLOORS

CONCURRENT MORNING SESSIONS - 10-11:20 AM

	10:00 AM	10:20 AM	10:40 AM	11:00 AM
PATTERSON 205	The Effects of Nature Therapy on Stress Lexi Bender ()	Examining differences in memory recapitulation for emotional stimuli Allison Cline, Luvada Mayle	Policing Local Communities: Using Q Methodology To Study Policing Perspectives Dylan Kresak, Tyler Young	
PATTERSON 206	Investigating Biological Factors Affecting Aggressive Behavior and How These Factors are Viewed by the Public Lily Hefner	Looking into Rehabilitative Efforts in United States Prisons: What is Needed? Julia Ravazza	A Variation on the Graph Coloring Game Asia Morgenstern	
PATTERSON 207	ScoreStash: Sheet Music Library Management System Ian Herr	The Miracle of New Life: Understanding the Costs Associated with Raising a Child Lucas Toohey, Jonas Clark, Amber Cepec	Public Policy and the Human Condition: A Study of Poverty, Crime, and Mental Health in Rural Pennsylvania Reaghan Wilkerson	Enhancing Engagement and Early Exposure and Exploring Finance and Accounting Pedagogy in K-12 Education Jonas Clark







PATTERSON FIRST AND SECOND FLOORS

CONCURRENT AFTERNOON SESSIONS - 1:30-2:50 PM

	1:30 PM	1:50 PM	2:10 PM	2:30 PM
PATTERSON 105	The Starry Night and the Taboo of Female Experience Charlie Barefield	Fanatics Gia Francisco, Kimberly Cora Kathryn Rankin	Reinforcement Learning in Pokémon Showdown Joshua Green	Understanding Flight Delays via Machine Learning Lindsey Johnson
PATTERSON 107	Monstrous Performances: A Queer Interpretation of Frankenstein's Creation Kamryn Taylor	The Benefits and Applications of Transcriptions Jack Romocean	Mind the Gap: Exploring Proposed Mediating Factors Between Sleep Quality and Dissociation Madison McClernan	Effect of Neuropeptide Y on Staphylococcus aureus biofilm formation Talia Morgenstern
PATTERSON 110	The Unseen Casualties of war: How American Anti-War Science Fiction Novels Emulate Modern- Day Conflicts Sydney Isabelle Rensel	Contrasting Quality in Contemporary Romance Novels: A Study of Tropes, Sex Scenes, and Social Media Influence Chloe Smith	Detection of Structural Variants in Patients with Recurrent Pregnancy Loss Using Optical Genome Mapping Addison Sofran	Roadmap to Financing and Car Ownership Dylan Llewellyn, Xavier McDonald, Ashly Roa





_ _ _ _ _ _

PATTERSON FIRST AND SECOND FLOORS

CONCURRENT AFTERNOON SESSIONS - 1:30-2:50 PM

	1:30 PM	1:50 PM	2:10 PM	2:30 PM
PATTERSON 205	Environmental Analysis of Abandoned Mine Drainage Avery Keenan, Nathan Barber, Rachel Brady, Bailey Garbowsky, Simon Hauser, Talia Morgenstern, Cheyenne Piper, Jamie Roberson, Alexander Rowland, Aaron Snyder, John Wozniak	The Role of Sleep in Emotional Memory Encoding and Retrieval Gianna Lepore	What the Heck is in My Paycheck? MacKenzie Meyer, Brooke Horvath, Kyle Bruno	From Pixels to People: The Power of UX in Problem- Solving Rosh Talla Defo
PATTERSON 207	Prime Juggling Patterns with a Fixed State Asia Morgenstern	TNFiT: Evolution to Fitness Manny Fomundam	Effects of Rape Myth Acceptance, Sexual Assault Experience, and Gender on Risk Perception and Constructive Memory Luvada Mayle	A Word to the Wise: A Scrabble Al Agent Asia Morgenstern, Elizabeth Walters, Steel Boyer





URAC-2025 FEATURED PODIUM PRESENTATIONS

MUELLER THEATER AND FACEBOOK LIVE

MORNING SESSION – 12-1 PM

RSIs in College Instrumental Music Majors: Causes and Solutions
Shelby Rebecca Pocono
Advisor: Melinda Crawford Perttu
A Numerical and Differential Analysis of Smoking Habits in Young Adults Following an SEIS Model of Disease Spread
Madison McClernan Advisor: Heather Muchowski

AFTERNOON SESSION – 3-4 PM

	Extracting Cobalt from Scrap SmCo Magnets using Neat Organic Extractant
3-3:25 PM	Rhett Sanderson
	Advisor: Pete Smith
	Policing Local Communities: A Thematic Analysis of Tonality Trends and Perceptions of Media Coverage (2017-2023)
3:30-3:55 PM	Tyler Young Advisor: Andy Bain







URAC-2025 RESEARCH ROUNDTABLES

PATTERSON

RESEARCH ROUNDTABLES — PATTERSON 106

10-10:45 AM	Gender Biases and Archetypes in Storytelling Faculty Moderator: Kristinanne Kalata Madyson Treharne, Isabella Barnabei, Chloe Smith
1:15-2 PM	Intersectionality in Literature and Society Faculty Moderator: Kristianna Kalata Leah Baldassare, Samantha Burnett, Alexandria Power, Emily Kirkwood
3-3:45 PM	Performativity in Literature and Culture Faculty Moderator: Kristianne Kalata Kamryn Taylor, Breanna Peck, Emma DeSimone, Charlie Barefield



Grad School Application Workshop



11:40 AM Hoyt 200 Are you a junior thinking about applying to grad school? Join Dr. Fields, Dr. Muchowski, Dr. Luisi and seniors who have already been accepted into PhD programs in the fall to learn about the application process and what to work on over the summer!

WESTMINSTER COLLEGE

PROFESSIONAL NETWORKING SYNPOSIUM SAVE THE DATE!

FRIDAY, SEPTEMBER 26, 2025

Opportunities for students, alumni, and friends of Westminster College to meet and network with others in their field.

CREATIVE WORKS & MUSICAL PERFORMANCES

McKelvey, Patterson, & Orr

URAC-2025

URAC-2025 CREATIVE WORKS

MCKELVEY, PATTERSON HALL, & THE QUAD

ART

FOSTER ART	DISPLAYED IN GALLERY GALLERY TALK: 12:30-1 PM	DISPLAYED OUTSIDE GALLERY ARTIST PRESENT: 11:20 AM-12:20 PM
GALLERY	Senior Capstone Exhibition Kylee Shannon	The Art of Makeup Alexa Tovarnak
MCKELVEY 3rd FLOOR	1 PM-2 PM Blocks Joshua Glaser	
ATRIUM		

POETRY AND SCRAWL RELEASE

MAIN QUAD	9 AM-4 PM	
	Where They Are From: A Poetry Collection by the Class of 2028	
	9 AM-4 PM	
	SCRAWL Spring 2025 Release TABLE	
CULTURAL CENTER	11 AM-12 PM	
	Scrawl Release Party	
	2-3 PM	
	Sigma Tau Delta Poetry Slam	

URAC-2025 MUSICAL PERFORMANCES

MCKELVEY AND ORR AUDITORIUM

MUSIC

	9:45-10AM	
MCKELVEY TUB	The Trumpet Troupe Laci Marstellar, Michael Everhart, Vinnie Johnstone, Karissa Petruso, and Autumn Stemmler	
	11-11:15 AM	
MCKELVEY TUB	The Westminster College Trombone Company Benjamin Burke, Timothy Mulcahy, Michael Everhart, D'Artagnan Whalen	
	11:45 AM-12 PM	
MCKELVEY TUB	Chamber Singers Performance Alexandra Webster, Amber Cepec, Jane Patterson, Elena Macdonald, Amelia Klinar, Anna Hall, Abigail Christy, Nolan Lapikas, Liam Chute, Tyler Wittmann, Gabriel Spinello	
	2:20-2:50PM	
ORR AUDITORIUM	Pulse and Passion: Unveiling the Power of Percussion Performance Shannon Witkouski, Ryan Bramson, Lauren McTiernan, Ryan Shaw, Tyler Wittmann	

The Holcad

Westminster's Official Online Student Newspaper



wcn247.com



Book an appointment or visit us today!



2nd Floor McKelvey Campus Center| Student Success Center academicsuccess@westminster.edu |https://www.westminster.edu/academics/academic-success/

Disability Resources

WESTMINSTER COLLEGE

Offering equal Opportunities to Jearn & work!



McKelvey Campus Center, 2nd floor Student Success Center craigfa@westminster.edu 724-946-7192

VIDEO SCREENINGS & TRAVEL EXPERIENCES

URAC-2025

Mueller Theater & Cultural Center

URAC-2025 VIDEO SCREENINGS AND GLOBAL EXPERIENCES

MCKELVEY

VIDEO SCREENINGS

	11 AM
MUELLER THEATER	Hidden in the Shadows: The Making of The Watchful Eyes Brittany Marburger and Madyson Treharne
	11:30 AM
	Minute Madness Mason Peck

TRAVEL EXPERIENCES

CULTURAL CENTER	10-10:30 AM
	Eco-Travel, Westminster Away in the National Parks Avery Keenan, Silvio Corso, Brittany Marburger, Shea O'Donnell, Olivia Hodil, Jordan Deems, Amelia Mason, Evelyn Dickinson, Samuel Knapp, Aubrey Suttelle, Christina Loewe
	10:30-11 AM
	Healthcare in the Dominican Republic
	Abigail Guiste, Rachel Brady, Lauren Gross, Melanie Porras





PROFESSIONAL DEVELOPMENT & COMMUNITY ENGAGEMENT

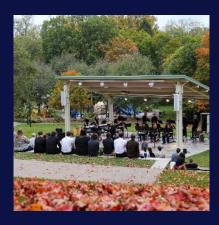


The PDCE office at Westminster College is dedicated to empowering students with the skills and connections they need to succeed beyond graduation. Through hands-on workshops, personalized coaching, and networking events, PDCE bridges academic learning with real-world experience. Whether students prepare for their first job or explore community engagement opportunities, PDCE supports every step of their professional journey.

Our signature events include the Professional Networking Symposium (PNS), where students meet alumni and industry professionals to explore career paths. Beyond the Quad concerts unite students and community members in celebration and connection. PDCE also facilitates hands-on opportunities like alumni-led workshops and student-community collaborative coursework, providing students with unique experiences that bridge academic learning with professional development.

Would you also like to connect with the PDCE? Our offices are MCC 266 and 267.

Email: pdce@westminster.edu







Congratulations to our TRIO Scholars Presenting or Performing at URAC!

- Emily Marchlewski
 Abby Guiste
- Cassie Evans
- Bella Buettner

- Shelby Pocono
 Talia Morgenstern
- Gwen Sernulka
 Ashlee Douglass

 - Asia Morgenstern
 - Zoe Burkett
 - Declan Catterall

Ready to take your success to the next level? TRIO can support your hard work and prepare you for your future! Scan the QR code to learn more, contact the TRIO Team, and apply to work with us!



The TRIO Scholars Program at Westminster College a federally funded Student Support Services program, and is 100% federally funded at \$272,364.00 for the 2024-2025 program year.



PUBLIC SPEECH & DEBATE

Berlin Lounge

URAC-2025 PUBLIC SPEECH & DEBATE

BERLIN LOUNGE

PUBLIC SPEECHES

2:00 PM	2:15 PM	2:30 PM	2:45 PM
An Honest Portrait of Plastic Recycling Stephan Gibson	From Horror to Hashtags Chloe Brodison-McMinn	Impromptu Sophia Klonowski	The Half Life of Marie Curie Ava Konton and Ruth Shindledecker
3:00 PM	3:15 PM	3:30 PM	3:45 PM
Demure: Mindful Memeability Alyjah McHugh	Latin History for Morons* Victoria Valcarcel-Matos	Corralling Rogue Sheriffs: Rise of the Unconstitutional Sheriff Maykla Wheeler	Extemporaneous Speaking Nathan Barber

*This speech includes vulgar language that some in the audience may find objectionable.







ENVIRONMENTAL PRIZE CANDIDATE











WESTMINSTER BEE COMPANY

Our Mission

We provide sustainable, natural, and local honey and bee products from Westminster College's Apiary. This venture and your purchase supports students, a hands-on education, and the environment.

Student-Led Business Venture

Students gain real-life business experience and entrepreneurial skills. Students from all majors come together to showcase their own unique skills and run a small business.

Hands-On Education

Students get their hands a little...sticky while learning the process of how honey is made, and taking the honey from farm to table. Students get to do everything from opening the hives and extracting the honey and putting it into jars, to designing labels and managing profits.



Congratulations to all undergraduate researchers, performers, and artists presenting today!

What a great day to BEE a Titan!

Follow us on Instagram @wc_bee_company





THE WILEY THE WILEY ALUMNIHOUSE

As a part of the WC Office of Institutional Advancement, the Alumni Engagement Office, located at Wiley House, helps to raise money for scholarships and student-centered projects....

....like the upcoming fundraising campaign for Titan Athletics:



Support from Clash of the Titans will help bolster Westminster's 21 athletics teams in providing:

> NEW EQUIPMENT TRAINING TRIPS + MORE



FOLLOW US ON IG! @westminsterpa.alumni westminster.edu/alumni

Clarence and Mary Ann Harms Center for the Environment

Proud Sponsor of the URAC Environmental Prize

The mission of the Harms Center for the Environment is to connect people with each other and the natural world \cdot We strive to create an understanding of the dynamic relationships among society, our environment, and the economy \cdot We offer programming and resources to foster critical thinking, creative expression, data collection and analysis, ethical judgements, and entrepreneurial endeavors, and human wellbeing \cdot We embrace diverse perspective and thought consistent with Westminster College's liberal arts heritage \cdot



Mark your calendar now for the Student Symposium on the Environment, Thursday, December 4th, 2025

Follow us on Instagram @center.forthe.environment.wc

Congratulations to all undergraduate researchers, performers, and artists presenting today!







Course Code ECO 399

This is a 1 credit practicum which meets weekly and is open to all! Aquaint yourself with the fundaments of investing with Westminster business faculty and students

Is graduate school in your future?



Ready to become the *next top educator, leader, school counselor, or researcher*? Join us and make your mark!

Flexible Learning Options: Full- or part-time <u>online</u> programs to fit your schedule. Innovative Curriculum & Expert Faculty: Learn cutting-edge practices from experienced educators.

Affordable Excellence: The most competitive tuition rates for graduate programs in our region. Westminster College Graduate School Online Master's in Education Programs with & without certification in:

General Ed | Reading Specialist School Counseling | Principal

Email us to schedule an appointment and discuss your future with us:

schoolofeducation@westminster.edu



WESTMINSTER COLLEGE | School of Business

Apply Today!

ΜΒΑ

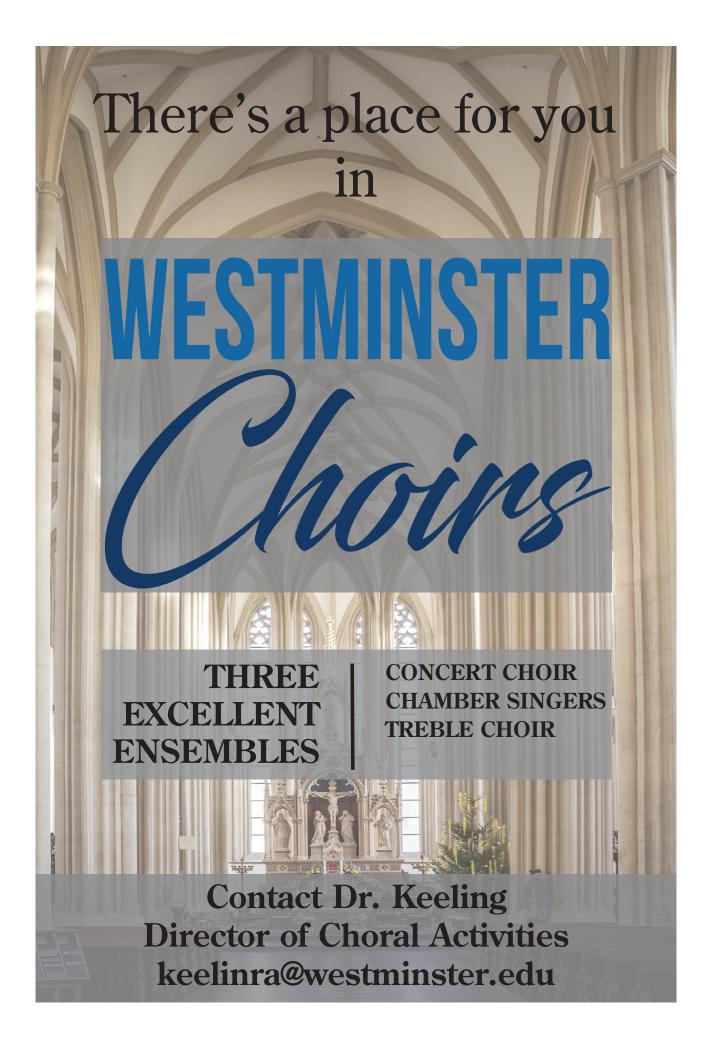
Finish in as little as <u>1 year</u>

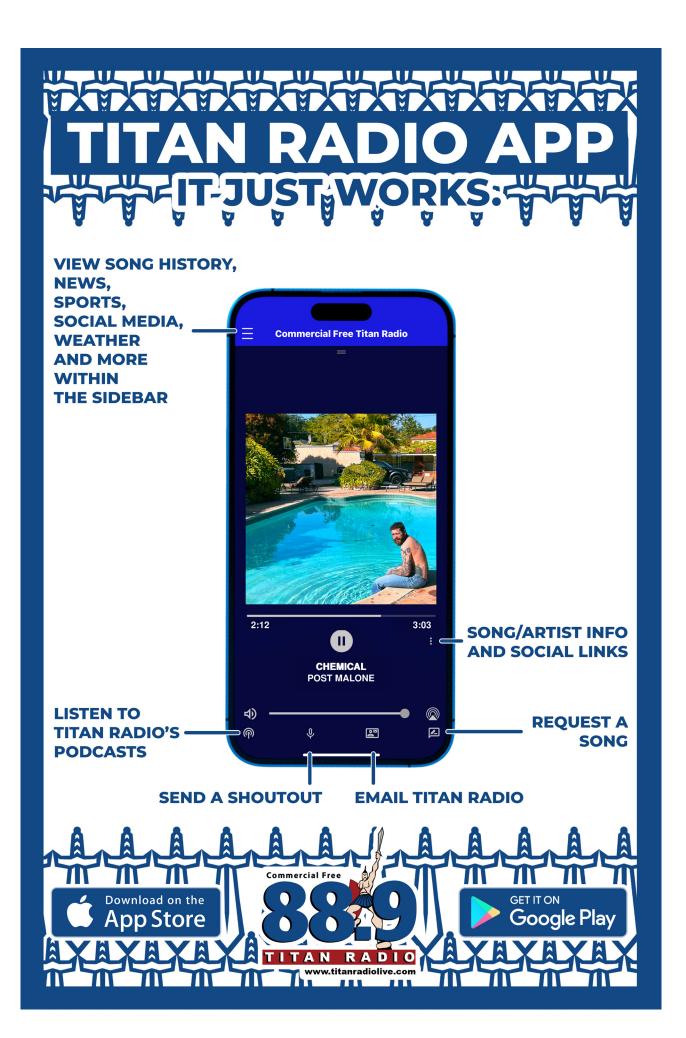
Online courses allow you to work while completing your degree

All undergraduate majors welcome!



for more information, contact Dr. Badowski at badowsr@westminster.edu





WESTMINSTER COLLEGE

Drinko Center for Undergraduate Research Patterson Hall | Room 315 319 S. Market Street New Wilmington, PA 16172-0001

JOIN THE CONVERSATION



