

Academic & Creative Excellence Festival 2019

Master Schedule and Participants

Tuesday April 16

University Chorale and Emulate Concert

7:30-8:30 pm, Lehman Auditorium

Directed by Ryan Keebaugh, Assistant Professor of Music

Student guest director: Kaleb Branner

University Chorale

Folasade Arasanyin
Asha Beck
Emily Bennett
Yoel Bobadilla
Elliot Bowen
Kaleb Branner
Megan Breidigan
Robert Chaplin
David Chun
Bruce Cypress
Elizabeth Eby
Benjamin Greenleaf
Daniel Hackman
Daniel Harder
Jareya Harder
Joshua Holsapple
Jacob Horsley
Aaron Horst
Earnest Kiah
Kiara Kiah
Evelina Kilimnik
Stephanie Kniss
Hannah Leaman
Philia Lienardy
Isaac Longacre
Elizabeth Lucas

Evangeline Lupanov
Rachel Lute
Ally Mankamyer
Kyle Miller
Luke Mullet
Jacob Myers
Joshua Overacker
Heather Ralls
Anna Ressler
Sarah Ressler
Nathaniel Roy
Joseph Seitz
Joshua Sheppard
Bethany Shultz
D'Allen Simmons
Andrew Stoltzfus
Phoebe Swe
Avery Trinh
Andrea Troyer
Laura Troyer
Tessa Waidelich
Leah Wenger
Lucas Wenger
Clarissa White
Verda Zook

Emulate

Asha Beck
Joshua Holsapple
Isaac Longacre
Rachel Lute
Ally Mankamyer
Luke Mullet
Joshua Overacker
Anna Ressler
Sarah Ressler
Nathaniel Roy
Joseph Seitz
Leah Wenger
Lucas Wenger

Wednesday April 17

Campus Worship: Holy Week Alfombra **10:10-11:10 am, Martin Greeting Hall, Campus Center**

Gather with the Latino Student Alliance (LSA) for a Holy Week worship service, around the alfombra freshly prepared by LSA and art students, to welcome Jesus in this Holy Week for Christians.

Presenter: Anastasia Dronov

Participating LSA members: Ariel Barbosa, Eric Ocaranza, Fred Flores-Cano, Jacob Horsley, Joshua Gómez, Kayley Scottlind, Diana Crespin-Gómez, Mario Hernández, Rachel Loyer, Walter Samayoa and Donaldo Lleshi.

Advisors: Ana Cruz and M. Esther Showalter, LSA Advisors; with Cyndi Gusler, Professor of Visual and Communication Arts and Nancy Heisey, Associate Dean of Seminary

Sawdust carpets (Spanish: tapetes de aserrín), similar to alfombras, are one or more layers of colored sawdust, and sometimes other additional materials, laid on the ground as decoration. Sawdust carpets are traditionally created to greet a religious procession that walks over them. The tradition of decorating streets in this fashion began in Europe and was brought to the Americas by the Spanish. The tradition is still found in Mexico, Central America, parts of South America and parts of the United States, but it is strongest in Mexico and Central America.

The most traditional use of these carpets is for processions related to Holy Week in Mexico and Central America (especially in Sutiaba, León, Nicaragua and Antigua Guatemala) and Corpus Christi in the United States. In Mexico, their use has been extended to processions dedicated to patron saints, especially in Huamantla, Tlaxcala and Huajuapán de León, Oaxaca as well as to Day of the Dead, especially in central Mexico.

STEM Games Quiz Bowl **3:50-5:15 pm, Common Grounds**

Hosted by Matthew Siderhurst, Professor of Chemistry

Teams of Biology, Chemistry and Mathematical Sciences students will match their wits in response to multiple-choice questions from six subject areas: biology, chemistry, mathematics, physics, computer science, and faculty human interests. Everyone is invited to watch the fun! Snacks will be served for the audience and participants.

Documentary: *No Longer Theory*

Wednesday, 4:00-5:00 pm, Main Stage Theater (UC170)

This documentary tells the story of Peacemakers EMU grad Michael J. Sharp and Zaida Catalán who were murdered a year ago in the Democratic Republic of Congo.

Produced by members of Jerry Holsopple's Documentary Production class: Toni Doss, Paul Johnson, Christy Kauffman, Luke Mullet, Missy Muterspaugh, Kieran O'Leary, and Riley Swartzendruber

Keynote Presentation: Drew Lanham

"The Evolution of a Right-Brained Ecologist – Objective Data Gatherer to Artful Absorber"

Wednesday, 7:30-8:30 pm, Lehman Auditorium

J. Drew Lanham, Ph.D., is the author of *The Home Place: Memoirs of a Colored Man's Love Affair with Nature*, which received the Reed Award from the Southern Environmental Law Center and the Southern Book Prize, and was a finalist for the John Burroughs Medal. He is a birder, naturalist, and hunter-conservationist who has published essays and poetry widely. An Alumni Distinguished Professor of Wildlife Ecology and Master Teacher at Clemson University, he works to understand how forest management impacts wildlife and how human beings think about nature. Dr. Lanham is intrigued with how culture and ethnic prisms can bend perceptions of nature and its care. He strongly believes that conservation must be a blending of head and heart; rigorous science and evocative art. During his lecture, he will read from *The Home Place* as well as recent article and poetry.

Reception with Drew Lanham

Wednesday, 8:30-9:15 pm, Brunk Maust Lounge, Campus Center

Thursday April 18

All Day

Student Exhibition

Student artwork from Painting, Ceramics, and Three-Dimensional Design will be on display all day at the Hartzler Library Gallery during the ACE Festival. While attendance will not be monitored here, please stop by to enjoy this exhibit!

Other Displays

The following items can be viewed throughout the day Thursday; attendance will be monitored during the specific session times noted in the schedule below.

Posters in Suter Science Center lower level
 Senior art show in the M.M. Gehman Art Gallery
 EMU Authors' display in Martin Greeting Hall (Campus Center) – until 3:30 pm

Oral Presentation Session A

Thursday, 8:30-9:45 a.m.

Design in Medicine and Engineering Moderator: Esther Tian	Strite Conference Room (Campus Center 105)
Allan Peng	The iGEL and King airway: A surveillance study comparing supraglottic airways on out-of-hospital cardiac arrest patient outcomes
Dylan Grove	Design and Implementation of a Subsonic Educational Wind Tunnel
Nursing Stories and Wholistic Pain Management Moderator: Laura Yoder	Campus Center 226
Danielle Davidson Joy Driver Tarsha Baker Aaron Gusler Kaitlyn Klager	Stories from the bedside: Living the Sacred Covenant
Marina Baker Danielle Davidson Amber Dodson	Complementary Therapy in Chronic Pain Management: An Answer to the Call of Wholism
Honors Capstones: STEM Engagement and Music Outreach Moderator: Kirsten Beachy	Roselawn 306
Mario Hernández	The effects of student engagement on retention in STEM programs at EMU.
Maria Yoder	Community outreach string quartet
Literature: Hysteria, Feminism, Christianity, and War Moderator: Marti Eads	Suter Science Center 104
Lydia Chappell Deckert	The Hysterical Grief of Septimus Warren Smith and Clarissa Dalloway
Terry Jones	Feminist Links to Virginia Woolf in Dorothy L. Sayers's STRONG POISON
Abraham Kamau	Virginia Woolf and Dorothy L. Sayers and the Church
Gwen Mallow	Men, Women, and the Room

Coffee break with music

Thursday, 9:45-10:30 am, Brunk Maust Lounge and Martin Greeting Hall, Campus Center

Instrumental Quintet

Jacinda Stahly-Dahl, violin
 Caroline Lehman, violin
 Isaac Stahly-Dahl, viola
 Maria Yoder, cello
 Erin Brubaker, clarinet

Oral Presentation Session B

Thursday, 10:30-11:45 a.m.

DASS Panel: Virginia Policies	Strite Conference Room (Campus Center 105)
Moderator: Carol Hurst	
Jakya Jones	The Effects of Solitary Confinement
Abraham kamau	ISSUES OF GUN VIOLENCE
Rhonda Obaugh	Benefits of Kinship Foster Care in Virginia
Eliana Tejedor Hernandez	EQUAL RIGHTS AMENDMENT:WHAT DOES VIRGINIA SAY?
Nursing: Issues in Public Health	Campus Center 226
Moderator: Don Tyson	
Emma Millar Maria Cardoso-Martinez Heyrin Cha Katlyn Shelton	Addressing vaccination compliance through nursing actions: Opinions, obligations, and opportunities
Jeannine Uzel	Increasing Public Health Nurse Engagement
Honors Capstones: Digital Ethics and Food Culture	Roselawn 306
Moderator: Mark Sawin	
Solomon Brenneman	Digital Anabaptism: Anabaptist Responses to Technology Addiction and Social Networking
Sylvia Mast	Stories Through Food - A Collaborative Cookbook
Gendered Expectations in Literature	Suter Science Center 104
Moderator: Sonia Balasch	
Josh Holsapple	The Choice Between Career and Family in Dorothy L. Sayers's GAUDY NIGHT
Anali Martin	What it Means to Be a Woman in Jane Austen's SENSE AND SENSIBILITY
Nikki Mumaw	Linking Woolf's and Sayers's Feminist Perspectives
Claire Waidelich	Virginia Woolf and Gendered Expectations

Environment and Community	Seminary 123
Moderator: Laurie Yoder	
John Dudley Ethan Mathews	Park Woods Project: BMPs For Stormwater Management
Bekah Mongold Nidhi Vinod	Conserving and Restoring Park Woods
Xander Silva Victoria Barnes	Park Woods Project: Stakeholder Management
Ethan Mathews Micah Buckwalter	Identifying water contaminant input location and timing in a local agricultural watershed.

Poster Session A

Thursday, 10:30-11:45 a.m.

Suter Science Center lower level
(Concourse South, Room 001 and hallway)

Business and Leadership posters

Presenters and Co-Authors	Project Title
Travis Abele	Gatorade - Environmental Analysis
Micah Boyer	Everence FCU
Kelli Brady Alia Miller Makayla Morris	The effects of college tuition costs
Kelli Brady	Environmental Analysis of Airbnb
Julie Burkhardt	Environmental Audit
Julie Burkhardt	Toyota Environmental Analysis
Andrea Cable	An Environmental Analysis on Chipotle
Sergio Canales	SONY ANALYSIS
Victoria Dinges	Environmental Audit
Fred Flores	United Kingdom Banking Industry
Jourdyn Friend	JAG
Riley Kingsley	Costco: Environmental Analysis
Leigh Lumsden Micah Boyer Zeki Salehi	Satisfaction of on Campus Living at Eastern Mennonite University
Cheyenne Marzullo Jack Leyda Fred Flores-Cano	What are the main contributing factors that impact a student's college decision?
Kenzie McBride	What Does The Future Hold For Our Environment
Kenzie McBride	Starbucks SWOT Analysis
Lindsey Morris	Honda Motor Company Environment Analysis
Erik Peachey	Adidas- Environmental Analysis
Cristian Romero	Tesla Environmental Analysis
Austin Sachs Gillian Zehr Michael Wilhite	Email Communication at EMU

Austin Sachs	Protect US: An Innovator in Private Ordering
John Sanchez	Apple Environmental Analysis
Daniel Scott	Farm Credit of the Virginias Environmental Analysis
Tiffani Shaheen	Target Environmental Analysis
Jacob Sloan	Coca-Cola - Open Happiness
Virginia (Ginny) Sorrell	My Environmental Audit
Caldwell Tariq	Environmental Analysis of PlayStation
Austin Tomlin	Environmental Analysis of Verizon
Michael Wilhite	Environmental Analysis of TaylorMade
Sean Wright	Environmental Audit
Gillian Zehr	Dylamato's Market

Seminary Chapel: Maundy Thursday Service

Thursday, 10:50-11:50 am, Martin Chapel

Feasting and Footwashing: The Five Senses of Maundy Thursday

Reflection by Valerie Showalter

From the time that Mary anoints Jesus (John 12) through the Passover meal and in footwashing (John 13), the Gospel of John appeals to us to engage our senses, profoundly embodying the last days of Jesus. The smell of nard, the gentle touch of hands on feet, the sumptuous feast that invites us to 'taste and see,' and the difficult words of truth and parting ... all invite us to step in a bit closer, to a spirituality that is grounded in who we are: the imperfect and beautiful children of God.

Music Department Student Recital

Thursday, 12:00-1:00 pm, Lehman Recital Hall (lower level)

Presented by students in the Music Department.

Program available at the event.

Feel free to bring a packed lunch to the recital.

Oral Presentation Session C

Thursday, 1:15-2:30 p.m.

DASS Panel: Issues that Impact Campus Life Moderator: Jenni Holsinger	Strite Conference Room (Campus Center 105)
Rebekah Hoskins	A Social Work Study on College Campus Environments for Students with Autism
Andy King	Changing Beliefs: An Empirical Study of College Student Religiosity and Spirituality
Noah Yoder	A Case For Medical Cannabis
Emma Yoder	The Effect of Perceived Sexual Norms on Behavior
Creative Writing: Identity and Ethics Moderator: Chad Gusler	Campus Center 226
Josh Holsapple	Across the Water
Yordanos Tesfa	A Blossom
Clara Weybright Lydia Chappell Deckert	Give Me Back My Pants: An Independent Publishing Project
Business and Leadership Videos: Environmental Audits Moderator: Jim Leaman	Roselawn 306
Travis Abele	Environmental Audit
Lindsey Morris	In Home Audit
Makayla Morris	Makayla's Environmental Audit Project
Jeremy Schaar	Moving Forward
Tiffani Shaheen	Environmental Audit
Paul Wilson	Environmental Audit
Kyungho Yu	Sustainability of House Heating Through Eastern-Constructing Style: Korean Underfloor Heating System
History: Mennonites, COs, and Change Moderator: Mary Sprunger	Suter Science Center 104
Solomon Brenneman	Cooking Mennonites: A Half-Century of Mennonite Change Through the Lens of Mennonite Cuisine
Adam Harnish	How to Build Controversial Facilities on EMU's Campus
Trevor Oyer	Mennonites Dropping "Mennonite": Branding in the Twenty-First Century
Kara Smith	Changing Views of Conscientious Objectors: An Analysis on the Transformation of the Public's View of CO's from the WWII Era to Vietnam.

Poster Session B

Thursday, 1:15-2:30 p.m.

Suter Science Center lower level
(Concourse North, North and South Corridors)

Biology posters

Presenters and Co-Authors	Project Title
Virtue Adowei Wendy Stapleton	Determination of the Effects of Electronic Cigarette Juice on the Growth, Fecundity and Stress Response in <i>C.Elegans</i>
Jared Bergman	Identification of Aromatic Compounds in Queensland Fruitfly Beer Waste Bait
Elliot Bowen Savannah Bontrager Ethan Mathews Bekah Mongold Alexander Navari RJ Ocampo Nidhi Vinod	Characterizing the winter-spring physiological changes of several EMU campus conifers
Chelsea Brubaker Shelby Alto Rachel Musselman	Evaluating the Longevity and Lasting Effects of <i>Enterobacter aerogenes</i> Resistance to Tetracycline
Rachel Clatterbuck	Would the environment of the bladder and kidneys lead to albumin denaturation?
Sreeneetha Devineni Linda Ouedraogo	Characterization of Tetracycline-sensitive and Tetracycline-resistant strains of <i>Enterobacter aerogenes</i>
Emilio Fajardo	Photosynthetic Activity of in Vitro Chloroplast
Emilio Fajardo	Assessment of the levels of phosphatases on the EMU compost in comparison to soil samples from various locations at EMU.
Anna Jemi-Alade Sukriti Silwal	An investigation of the reversion of <i>Enterobacter aerogenes</i> tetracycline-resistant bacteria to a tetracycline-sensitive state
Ethan Mathews Savannah Bontrager Elliot Bowen Bekah Mongold Alexander Navari RJ Ocampo Nidhi Vinod	Measuring the impact from various concentrations of Cu, Zn, and Fe on the germination and photosynthetic efficiency of two species in petri dishes: hybrid sweet (<i>Zea mays</i>) corn and mustard (<i>Brassica juncea</i>).
Xavier McCants Allene Henderson	Multidrug resistance in <i>Enterobactero Aerogenes</i>
Aaron Moyer	Validation of CRISPR as the Mechanism of Phenotypic Change in <i>E.coli</i> in a Kit Available for the General Public
Ron-Joseph Ocampo Savannah Bontrager Elliot Bowen Ethan Mathews Bekah Mongold Alexander Navari Nidhi Vinod	Measuring photosynthetic efficiency, chlorophyll content, and antioxidant concentration in metal ion-induced hybrid sweet corn (<i>Zea mays</i>) and mustard (<i>Brassica juncea</i>) grown in soil.

Ron-Joseph Ocampo Marchelle Smucker	The Role of unc-53, aex-3, and nid-1, in Axonal Guidance During Neurodevelopment in <i>Caenorhabditis elegans</i>
Alexandra Raber	Differences in Volatile Terpenes of Spruce Trees
Corrie Riggs Jonathan Nielsen	Genetic Transfer of Multi-Drug Resistance Between Non-Related Bacteria
Jonah Short-Miller Matthew Troyer	Characterization of Tetracycline Resistance in <i>Enterobacter aerogenes</i>
Andrew Troyer Daniel King	Getting the Worm Tracker on Track: Improving the Speed and Functionality of the Parallel Worm Tracker
Seth Weaver Jared Bergman	Systematic Characterization of Antibiotic Sensitive and Resistant Strains of <i>Enterobacter Aerogenes</i>

MS in Nursing and Music posters

Presenters and Co-Authors	Project Title
Miriam Ferguson	Moral Distress in Critical Care Nurses
Ashlee Simmons	Improving Self-Regulation in Children through a Yoga Class
Robert Chaplin	Tearing Down the Wall: Removing the barriers between Classical and Popular Music

VACA Stage Set and Video

Thursday, 1:15-2:30 pm, Mainstage Theater (UC170)

Theater Set Design: A Collaboration

Jonas Beachy, Jacob Horsley, Andrew Schunn, Laura Troyer, Tessa Waidelich, Jason Wong
With Justin Poole, Assistant Professor of Theater and Shannon Dove, Theater Tech Director

This presentation will describe the collaboration between Esther Tian's first-year engineering class and the theater set construction team to design and build the stage set for EMU's spring musical, *Beauty and the Beast*.

UNTITLED

William Ewart, Isaac Longacre, Anna Ressler, Andrew Stoltzfus, Christian Stutzman

This is a senior show short film. Here is the synopsis; Mike and Alice are third years at a university and share a class. They do not know each other until they are paired for a class project. They also share the class with a young woman who was in a relationship with Mike and is now spreading lies about him. They plan on meeting at a local coffee shop to work on the project. It is during these meetings that Mike develops a crush on Alice. He has been alone for a while because he had been secluding himself from other people. They get into a rhythm and Mike thinks things are going great between them, but one night Alice shows up with a guy

holding hands, this is her boyfriend. Mike chooses to let his crush go. Not long after he sees Alice's boyfriend drop her off at school. He is arguing with her about her college education being a waste of time. She enjoys college and excels in her studies. Mike wants to help her, so he turns to writing a letter explaining his thoughts. Mike delivers the letter after one of their work nights. It is the next day that Alice chooses to leave her boyfriend. Mike shows up for their next work night but she did not show up, thinking that he had offended her he leaves early to find her outside. She thanks him, and seeing the letter in her hands figures out what happened and asks if she would like to have some coffee sometime. Roll credits.

The Blacken Galaxy

Rances Rodriguez

This is a short stylized animation movie, around fifteen minutes in total. This animation is to be produced as a "paper-cutout" presentation style onto characters and overall environments within a sci-fi setting. The story centers between two main female characters and the galaxy itself far from our own, all to be narrated by one of the two characters on a situation involving the fate of their galaxy, currently being ravaged by an antagonistic force called "Ruta'hka". Halii, a student, seeks out potential recorded documentation on her galaxy's survival. After witnessing the horrors of the dying neighboring worlds her mentor, Anna, tries to ease her confusion by relaying the source of their destruction until present day. As the history slowly comes into light, all the chaos had manifested by a single mistake from just one being. A mysterious being, called Rannunonakii Unnakii, and his addictive gift called "Black Origin".

EMU Authors' Reception with music

Thursday, 2:30-3:30 pm, Martin Greeting Hall, Campus Center

EMU Wind Trio

Robbie Chaplin, clarinet

Josh Overacker, oboe

Rachel Lute, flute

2019 Faculty Authors

Owen Byer, Professor of Mathematics

Marti Eads, Professor of English

Cathy Smeltzer Erb, Professor of Teacher Education

Chris Gingrich, Professor of Economics

Julia Halterman, Director of MS in Biomedicine

Greg Koop, Professor of Psychology

Leah Kratz, Professor of Business

Hilary Moore, Adjunct Faculty in Applied Social Sciences

Andrea Saner, Professor of Old Testament and Hebrew Language

Tim Seidel, Professor of Applied Social Sciences, Peacebuilding and Development
 Matthew Siderhurst, Professor of Chemistry
 Deirdre Smeltzer, VP & Undergrad Academic Dean
 Carl Stauffer, Professor of justice Studies
 Andrew Suderman, Lecturer of Bible and Religion
 Esther Tian, Professor of Engineering
 Johonna Turner, Professor of Restorative Justice and Peacebuilding
 Dorothy Jean Weaver, Professor of New Testament
 Paul Yoder, Professor of Education

Oral Presentation Session D

Thursday, 3:30-5 p.m.

DASS/CJP panel: Racial Justice and Decolonization Moderator: Tim Seidel	Strite Conference Room (Campus Center 105)
Christopher Bennett	Voter Suppression and Identification Laws: Why Is Participation Being Stifled?
Alicia Maldonado-Zahra	The Decolonizing of Puerto Rico
Yordanos Tesfa	The Overrepresentation of Black Males in U.S. Prisons
Yasmiene Mabrouk	The White Underbelly of Lynching
Education: Documentation of Student Learning Projects Moderator: Paul Yoder	Campus Center 203
Mallory Bontreger	Teaching probability: Math in a special education resource setting
Taylor Martin	Famous Americans
Sarah Beth Ranck	Documentation of student learning: Rhombi, squares, and trapezoids in a high school geometry class
Rachel Shenk	Diving deep: An integrated study of the ocean environment
Anika Thomas	Documentation of student learning in geometry
Nursing: Barriers to Healthcare Access Moderator: Audrey Myers	Campus Center 226
Lauren Brintzenhofe Joleah Hamilton Audrey Martin Kayla Sauder	The exploration of emergency department use as primary care
Abby Byler Esther Ghale Anna Gibbs Haley Kuehle	Improving culturally informed care for LGBTQ+ clients
Music, Mania, Gender and Evil Moderator: Peter Dula	Lehman Recital Hall (LA25)
Kiara Kiah	Clara Schumann: A True Pioneer of 19th Century Music
Leah Wenger	The mad genius: the connection between mania and creativity
Yonas Ketsela	THE PROBLEM OF EVIL IN A SECULARIZED WORLD

History and Hispanic Studies: Diversity, Community, Ethics	Suter Science Center 104
Moderator: Ji Eun Kim	
Victoria Billups	Healing of Wounds? Analyzing the Unite-the-Right Rally of August 12, 2017 Through a Reconciliatory Faith-Based Lens
Mario Hernández	A New Way of Dealing with Adversity: A Critique of the Arthurdale Experimental Community
Raul Baltazar Mendoza	¿Por qué Vienen? (Why do they come?) : A look into immigration into the United States
Emilio Fajardo	Perception of the LGBTQ+ Community in Guantanamo, Cuba.
Emma Millar	Marginalized Voices in Filadelfia, Paraguay

Poster Session C

Thursday, 3:30-5 p.m.

Suter Science Center lower level west
(Mathematical Sciences and Engineering Wing)

Chemistry posters

Presenters and Co-Authors	Project Title
Katelyn Dean Destiny Ritchie	Phytoremediation of Copper Polluted soil with Radish and Zinnia plants
Anastasia Dronov	From Decorations to Meaningful Narratives: What Can Organic Chemistry Students Do with EFP?
Garrett Howard Cesar Perez de Leon	Phytoremediation Capacity of Brassica Rapa
Hannah Kurtz Joshua Gomez Martin Pou	To what extent does the Type of Plant affect the Copper Concentration in the Soil
Spencer Laitinen Javier Deltoro	What is the effect of copper of the growth of cilantro and mustard
Leah Lapp	Testing Coffee Quality with an Electronic Nose
Sylvia Mast	Comparing conventional and green techniques for synthesizing potential pheromones for Eudocima phalonia
Nicole Miller Kierra Zuercher	Flower Phytoremediation: Its Effect on Copper Levels In Soil
Luke Short Andrew Bennett	Absorbance of Copper
Jonah Short-Miller	Raspberry ketone trifluoroacetate as a lure for Bactrocera tryoni
Abigail Shumaker Savannah Bontrager	Influences of different factors on student scientific literacy
Hannah Sipe Heather Graham	An Analysis of Copper Contaminated Soil and The Possible Effects on The Growth of Plants

Andrea Troyer Graciella Odelia	The Effects of Different Copper Sulfate Concentration on Typha sp. of Wetland Ecosystems
Nick VanAmburg Jakiran Richardson	The Absorbtion of Copper With Raddishes
Malade Yigremachew	Phytoremediation: removing heavy metal from contaminated soil by using plant.
Theo Yoder Anna Paetkau	Effect of soil pH on the Phytoremediation capabilities of Radishes

Mathematical Sciences and Psychology posters

Presenters and Co-Authors	Project Title
Clayton Cordell	Emotional contagion on social media: Effects of Facebook post valence on reader's emotional affect
Emma Stutzman Judy Mullet Alexis Rutt	Beyond Civility: transforming learning communities through gratitude
James Paetkau Engineers for a Sustainable World Club	Solar Powered Greenhouse Aquaponics System
Laura Troyer Jonas Beachy Jacob Horsley Tessa Waidelich Jason Wong Andrew Schunn	Beauty and the Beast Set Design
Benjamin Zook	Engineering Design of a Solar Panel Kiosk

Senior Art Show

Thursday, 3:30-5:00 p.m. Margaret Martin Gehman Gallery (UC179)

Ivan Harris - "A Lost Identity," Studio Photography. Color studio photos that visually represent the identities of African Americans before and after the trans-Atlantic slave trade

Paul Johnson V - "The Worlds Inside my Head," 360° videos. Bring headphones and a phone or tablet to take in the show.

Missy Muterspaugh - "Marketing the Macabre," Photoshop illustrations. Photos printed in poster format of illustrations showcasing texture and color theory

Mariann Smith - "Surface in Pieces," Infrared Photography. Metal infrared photo transfers showing landscapes from my family farm

Riley Swartzendruber - "The Cloud Forests of Guatemala," Photographs from central Guatemala depicting the relationships humans have with their environment and their mutual effects.