CONGRESS CO-COORDINATORS
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2018 CONFERENCE CONTRIBUTORS
(AS OF 12/8/17)
American Association of University Women Fargo-Moorhead Branch
American Indian Public Health Resource Center
American Institute of Architectures
American Pharmacists Association - Academy of Student Pharmacists
Concordia College
Concordia College Students from Sigma Zeta (Math & Science Honor Society)
Concordia College Student Nurses Association
Concordia College Tri-Beta (Biology Honor Society)
Delta Kappa Gamma - Beta Chapter
EFARGO
Healthy Eating and Body Image Lab (directed by Dr. Beth Blodgett Salafia)
IDeA Network for Biomedical Research Excellence
National Organization of Minority Architects
NDSU Athletic Training Organization (CSO Organization)
NDSU Biological Sciences
NDSU College of Engineering
NDSU College of Graduate & Interdisciplinary Studies
NDSU College of Health Professions
NDSU College of Science & Mathematics
NDSU Electrical & Computer Engineering Department
NDSU Office of Admissions
Noridian Mutual Insurance/Blue Cross Blue Shield Public Health Association
Professor Beth Ingram, Provost, NDSU
Red River Valley Section of American Chemical Society
United States Department of Agriculture ARS-Insect Genetics & Biochemistry Research Unit

CONFERENCES OF DOOR PRIZES
(AS OF 12/8/2017)
Gate City Bank
MSUM Bookstore
NDSU Bookstore
West Acres Shopping Center

Conference Goals
- Increase young women’s interest in STEM-Science, Technology, Engineering and Mathematics.
- Foster awareness of career opportunities for women in science and mathematics related fields.
- Provide students an opportunity to meet and form personal contacts with women working in traditionally male occupations.
- Alleviate isolation of young women who are interested in science and mathematics.

Schedule
8:30-9:15 AM  Registration, NDSU Bentson-Bunker Fieldhouse (workshop materials will be distributed)
9:20 AM  Welcome, announcements and release of registrants to morning workshops
10 AM - 12:10 PM  Two morning sessions (see workshop listing)
12:10 PM  Lunch, NDSU Bentson-Bunker Fieldhouse
12:50 PM  Announcements and release of registrants to afternoon workshops
1:15-3:25 PM  Two afternoon sessions (see workshop listing)
3:40 PM  Students may be picked up at NDSU Bentson-Bunker Fieldhouse

Sponsored by the NDSU Office of Teaching and Learning in cooperation with Minnesota State University Moorhead, Concordia College and Essentia Hospital

Individuals needing special accommodations are encouraged to notify Nicole Hagness (nicole.hagness@ndsu.edu) and Karen Murie (karen.murie@ndsu.edu), Co-Coordinators of Expanding Your Horizons, in advance of this program.
LIST OF HANDS-ON WORKSHOPS
You will be walking outside from building to building, so please dress for the weather and wear closed-toe shoes and casual clothing that can get messy. These are “hands-on workshops.”

1 Nursing: The Most Trusted Profession
Explore nursing as a vocation to service in the world.
Tally Tinjum – Nursing

2 Make Your Own Microscope
We will be making our own microscopes out of materials you can find at home. After making our microscopes, we will try them out by looking at a variety of organisms and cell types!
Robin Fettig, Hannah Gunderson – Biology

3 Make Your Own Aspirin
We will be synthesizing our own aspirin in the lab by treating salicylic acid with acetic anhydride resulting in aspirin and acetic acid.
Hannah Gunderson, Robin Fettig – Chemistry

4 Crack the Code
Explore the connections between clocks and writing secret messages, and learn how math helps keep information safe.
Julia Walk, Concordia Math Club Students – Mathematics

5 The Game of SET
Learn how to play the card game SET and some of the math involved in this fun game!
Dan Biebighauser, Concordia Math Club Students – Mathematics

6 A Salty Situation
Students will study the impacts of pollution on aquatic animals.
Jennifer Sweatman – Environmental Studies

7 How to Teach a Rat New Tricks
You will observe rats who have been trained to press a lever for food and get to experience training rats.
Susan Larson – Psychology

8 Can Liquids be Magnetic?
We will learn the concept of magnetism and work with several magnetic materials.
Thelma Berquo – Physics

9 Radio Telemetry of Campus Squirrels
We conduct radio telemetry to document the location and behavior of red and gray squirrels on the Concordia College campus.
Joe Whittaker, Chloe Whitten, Diannesa Dizon, Beth Ringwelski, Brooke Maruska, Ann Marie O’Connell, Molly Francis – Biology

10 A-Mazing Experience
How quickly can you find your way through a maze? Find out how psychologists study learning conditions.
Peg Potter – Psychology

11 The Choice Is Yours
Do your decisions involve economics? Let’s analyze your choices and find out!
T.J. Hansen, Gregory Stutes – Economics

12 Mapping Your World
Join us to find the hidden treasure! It’s closer than you think.
Kay Anderson – Geographic Information System

13 Making Music with Drinking Straws
You will learn about the science of waves, and how to use this to make music with straws.
Ananda Shantri – Physics

14 THINK WILD!
What does a wildlife Biologist do for a living?
Learn about animals and their adaptations.
Donna Bruns Stockrahm, Tiffany Grieger, Breanna Huynh, Sara Sanderson, Miranda Sater – Biology

15 Healthcare Career Exploration
A behind the scenes look at healthcare opportunities and careers.
Patricia Wetzel – Nursing, Surgery, RT, SIM

16 Critical Care Nurses Make A Critical Difference
Hands-on experience of critical care nurses. Tour ICU and use some equipment. Work out medical equations and discuss the importance of science with a nursing career.
Tami Bigger, Jess Althoff – Nursing

17 Healthy Women, Healthy Communities
Learn about diversity in leadership positions and creating healthy communities through public health with hands-on individual and group activities.
Pearl Walker-Swaney – Public Health

18 RIP — Rebuild, Iterate, Pulverize
Repurposing materials in architecture can create a positive impact on the environment. Find out how through the RIP method.
Noor Abdelhamid, Dylan Neururer – Architecture

19 Girls in Engineering
Girls will be introduced to cool engineering projects such as unmanned aircraft system (UAS), Internet of Things (IoT), and smart mobile video.
Na Gong, Jinhui Wang – Electrical Engineering & Computer Engineering

20 Architecture Is For Everyone
An introduction to the world of architecture, how it helps us, and who can participate.
Hannah Langr – Architecture

21 Assembly Lines with Snacks!
A fun and interactive introduction to the assembly line process with snacks.
Nito Yodo, Tanzina Afrin – Industrial Engineering

22 Space-Making
Introducing participants to the design of space and form through space making and drawing exercises.
Heather Fischer, Emilee Olsted – Architecture

23 This Ain’t Your Grandma’s Aging Simulation
This session will expose students to some of the sensory and mobility issues experienced by many older adults.
Andrea Huseh-Zosel, Heather Fuller, Jane Strommen, Melissa O’Connor – Human Development

24 BABIES! More than Diapers & Drool
Learn what it’s like to be a baby researcher! Find out how researchers discover what babies know by studying behavior.
Rebecca Woods, Savanna Jellison, Shea Lamers - Developmental Science & Psychology

25 Eye-Tracking and Shopping
Students will learn about infrared eye-tracking technology and experience it first-hand while looking at images of clothing.
Emma Johnson, Maegan Jones – Human Development & Family Science

26 Body Positivity & Media Misconceptions
We will engage in positive body talk and teach ways to incorporate that into everyday life, as well as analyze images in the media.
Emma Johnson, Maegan Jones, Meghan Yerhot – Human Development & Family Science

27 One Day in Another Person’s Shoes
Discover some of the everyday challenges a person with a disability faces in an interior environment.
Susan Ray-Degges, Ann Ragan – Interior Design

28 Musculoskeletal Anatomy 101
Participants will learn about the muscle and skeletal systems with a variety of hands-on activities.
Nikki German, Shannon David – Athletic Training

29 Color Your World
Participants will experiment with textile dye methods and create a project they can take home.
Sara Sunderlin, Linda Manikowske, Ann Braaten, Jaeha Lee – Apparel, Retail Merchandising & Design
30 Communication Answers from Numbers  This workshop will explore the basic processes involved in analyzing social media content to make strategic decisions. Seseer Mou-Danha, Blessing Okafor – Strategic Communication

31 3D Printing Workshop  Scan an object, manipulate it in Tinkercad, and make a 3D print. Jacob Clark – Technology

32 We’re All Aging  Experience the aging process through sensory simulation. Learn about the field of aging and health while building empathy for daily lives of older adults. Gina Aalgaard Kelly – Gerontology, Nursing & Public Health

33 Placing the Past in Google Street View  Using scanners and 100 year old photographs, you will learn how to make the past visible on Google Street view with the website HistoryPin. Trista Raezer-Stursa, Katrina Burch - Digital Media

34 Criminal Justice: Beyond CSI  This workshop will focus on what criminal justice is and how it is used on a day to day basis. Jenna Borseth, Morganne Behl – Criminal Justice

35 Generation RX  An interactive presentation about the misuse and abuse of prescription medications with games and candy prizes. Kelsey Narlock, Carolyn Marg, Ellie Tupper – Pharmacy

36 I Want to Hold Your Hand  Learn about the profession of pharmacy and how to make lotions and lip balms using extemporaneous compounding techniques and equipment. Jeanne Frenzel – Pharmacy

37 Nursing: Listen, Feel & Pump It Up  Find out what it is like to be a nurse: how to take vital signs, check reflexes, listen to hear and lung sounds, etc.! Aurora Obembe, NDSU Student Nurses Association – Nursing

38 Scratch Workshop  Using computers develop a brick game. Simone Ludwig – Computer Science

39 Mapping Your Wherabouts  You will personalize Google Earth by creating an XML file. Anne Denton, Megan Bouret – Computer Science

40 Insects: The Good, Bad & Ugly  Experience and learn amazing things about insects and their relatives. Deirdre Prischmann-Voldseth, Marion Harris – Entomology

41 Eggs: No Chicken Required  Peek inside a developing egg! Join us as we explore the hidden world of a chicken embryo. Nik Snyder, Wendy Reed – Biology

42 Creating Tornadoes  Do you want to see how tornadoes form? In a controlled environment, we will set up conditions favorable for tornadoes to form. This will be the closest encounter with a tornado you will ever have. Adnan Akyuz – Climatology

43 Physics of Slime & Other Serious Matters  We will explore the physics of slime, ooblek, and other interesting experiments like building circuits and imaging human DNA. Brianna Santangelo, Mila Kryjevskaia, Lina Alhalholooy, Rachel Downing, Alistair McInerny – Physics

44 Termite Trails  Use experimental design to learn about termite behavior and pheromones. Elisabeth Wilson, Courtney Grula, Joe Rinehart – Biology

45 Animal Science  Learn about production agriculture by touring ANPC and learning about the different animal units and research being done in science at NDSU. Kacie McCarthy, Laura Grube – Animal Science

46 Making Better Decisions with Data  Learn how data and information can be used to make better decisions, such as which college to choose or which pet is the best for you. Emily Berg, Heather Retzer – Mathematics & Statistics

47 Learning About Seeing  Participants will learn how the brain incorporates visual information and dissect a real eye! Shanda Lauer, Nour Al-Abase, McKenzie Mann, Britney Banning – Psychology & Physiology

48 How Good is Your Memory?  Test your memory and explore how easily it can be influenced. Taylor Nelson, Anna Semanko – Psychology

49 Friend or Foe: Prisoner’s Dilemma  Are you confident your partner in crime would have your back? Find out and earn candy along the way. Anna Semanko, Taylor Nelson – Psychology

50 Combinatorics: Counting without Counting  We will explore the really cool Catalan numbers, some of the amazing objects they count, along with transformations between them. Sara Solhjem, Jessical Striker – Mathematics

51 Eat Your Science  We’ll extract DNA from strawberries to learn about DNA: what it is, what it does, and where we find it. Jenni Momsen, Caitlin Anderson, Rachel Salt-er, Tara Slominski, Kurt Williams – Biology

52 What Would You Do?  Social Psychologists now what you would do and the truth might just surprise you! Angela Bagne, Jennifer Redlin – Psychology

53 See Cancer Cells in Colors  Students will stain with fluorescent “colors” different structures in harmless cancer cells and observe them under a microscope. Estelle Leclerc, Priyanka Swami, Swetha Thi-yagarajan – Biology

54 Challenges and Successes of Women in Science  The workshop will introduce the successful women in science (including the Nobel laureates) and describe the usual challenges women face in work places and how those can be overcome. In addition, this will also show how women are good at multi-tasking (how they manage the work-life balance). Nilushni Sivapragsa – Food Science & Chemistry

55 The Hidden World of Soils  Be a soil scientist for a day as you learn what lives in dirt and make your own soil ecosystem. Libby Sternhagen, John Baggerly – Biology

56 Cryptography (Secret Messages)  Cryptography is a method of solving codes! Want to keep something a secret then you can use cryptography. Katie Neset, Taylor King – Mathematics

57 Fun With Polymers  Come experience the world of polymers and make glow in the dark slime, casein plastic, and wriggly gummy worms. Krystal Grieger, Sunanda Neupane – Chemistry

58 Insect Developmental Biology  Girls will get hands-on experience with insects and learn how to set up an experiment. Kendra Greenlee, Liz Cambron, Kayla Earls – Biology

59 Protecting Our Pollinators  Understand the lives of pollinators and how to help protect their habitats. Breana Kiser – Biology, Plant Science, Entomology
Expanding Your Horizons Student Registration and Release Form

A parent or guardian must sign this form for a student to be registered.

Registration fee of $10 covers cost of lunch, conference expenses and materials. Please enclose check (payable to NDSU) with this form and mail to: Expanding Your Horizons, NDSU Dept 2020, PO Box 6050, Fargo, ND 58108-6050. Registration deadline is February 16! Preregistration is required. Registration fees refunded until March 10 (by emailing nicole.hagness@ndsu.edu). Registrants will receive a postcard confirming their registration. PLEASE PRINT AND FILL IN ALL INFORMATION!

STUDENT’S NAME__________________________________________ HOME/CELL PHONE __________________________

ADDRESS _____________________________________________________________________________________________
(Mailing Address) (City) (State) (Zip)

SCHOOL NAME/ CITY_______________________________________ GRADE _____ EMAIL (OPTIONAL) ________________________________

DATE OF BIRTH _______

___ Check if you would like to receive further information from NDSU, MSUM and/or Concordia College

INDICATE NUMBER OF FIRST EIGHT CHOICES FOR WORKSHOPS. Put workshop number in blanks provided. Registration is limited to the first 450 applicants. Workshops will be assigned on a first come, first serve basis. Because popular workshops fill up quickly, and we will assign participants to similar workshops if the ones they chose are full. If similar ones are full, we’ll assign students on the basis of availability.)

_______  _______  _______  _______  _______  _______  _______  _______

1st  2nd  3rd  4th  5th  6th  7th  8th

If all of the above workshops are filled, please circle the areas that you are interested in MATH SCIENCE MEDICAL COMPUTER ENGR

If you want to attend workshops with ONE FRIEND, please indicate the name of the friend here and be sure to select the same workshops. Your friend’s registration form MUST accompany your registration form for you to be assigned to the same workshops.

Name of one friend (please print) ___________________________________________________________________________________________

Please indicate if you have a physical disability, allergy, or have special needs _______________________________________________________

______________________________________________

ASSUMPTION OF RISK AND RELEASE
The undersigned hereby releases, waives, discharges and covenants not to sue North Dakota State University, its officers, agents, employees, and OTL-EYH, all of which hereinafter known as “NDSU” from all liability to the undersigned in consideration of being permitted to participate in: Expanding Your Horizons.

The undersigned, in full recognition and application of the dangers and hazards inherent in the above activity, does hereby agree to assume all the risks and responsibilities surrounding my participation therein, and further, do for myself, my heirs, and personal representatives, hold harmless, release and forever discharge NDSU from and against any and all liability, damages, claims, demands, actions, or causes of actions, on account of damage to personal property or personal injury or death which may result from my participation therein whether caused by the negligence of NDSU or otherwise. The undersigned hereby assumes full responsibility for, and risk for bodily injury, death or property damage due to the negligence of the releases or otherwise while in, about or upon the premises of NDSU, or while participating in the above described event.

IN WITNESS WHEREOF, I have caused this release to be executed this day.

______________________________________________

PARENT/GUARDIAN Signature  Printed PARENT/GUARDIAN Name  Relationship to Student  DATE  Phone

In an emergency, if I cannot be reached, contact (preferably another parent or legal guardian):

______________________________________________  __________________________

Name  Relationship to participant  Phone

Please indicate if photographs of your child or other reproductions of your child’s likeness may be used in future EYH materials, including EYH websites (without name): ________ YES ________NO

North Dakota State University does not discriminate on the basis of age, color, disability, gender expression/identity, genetic information, marital status, national origin, public assistance status, race, religion, sex, sexual orientation, or status as a U.S. veteran. Direct inquiries to: Equal Opportunity Specialist, Old Main 201, 701-231-7708 or Title IX/ADA Coordinator, Old Main 102, 701-231-6409.