

An Intertribal Research and Resource Center Newsletter

May, 2019

Mission:

The IRRC provides services and builds capacity for enhancing food, energy, and water sustainability for tribal communities in the Northern Plains.

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TECHNICAL COLLEGE
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& RESOURCE CENTER

Tribal Landscapes

Research and Resources for Food, Energy, and Water Sustainability



UTTC Board Chairman, Jamie Azure (pictured above) and Bismarck-Mandan Chamber of Commerce officially opened the Intertribal Research and Resource Center with a ribbon cutting. Also pictured: UTTC's President McDonald and IRRC Staff.

Ribbon Cutting and STEM Spectacular

United Tribes Technical College hosted an official Grand Opening for the Intertribal Research and Resource Center and STEM Spectacular on April 5th, 2019. UTTC President Leander “Russ” McDonald opened the event stating, “UTTC has a long history of serving as a resource for tribal nations throughout the Great Plains region. The Intertribal Research and Resource Center builds on a strong network of partnerships to enhance research activities to positively impact land management and the sustainability of natural resources.”

Speaking to faculty, students, and community members Center Director Jeremy Guinn said “Food and natural resources hold significant places for tribal communities’ economy, culture, sustainability, and sovereignty and are often under studied. This project will, for the first time, allow us to expand our science beyond our academic program, by bringing full-time research scientists and outreach specialists to work on natural resource issues directly affecting tribal communities.”

Collaborative Research and Outreach

Congratulations to the following individuals for receiving IRRC funding for innovative research and outreach:

- Teacher Ed Department faculty Lezlie McElwie, Brenda Rhone and Lisa Cantlon from General Studies proposed a 9-week K-12 outreach program focusing on developing Math skills.
- Business Instructor Erik Holmstrom proposed professional development training to integrate research software into a business research course and develop data science skills in students.
- Chemistry faculty Dr. Paul Pansegrau proposed a supplement to his NSF grant to test catalysts for hydrocarbon capture.
- IRRC Research Faculty Dr. Gurjot Dhaliwal proposed biomaterials research on insulation foam from soy beans and mentoring two students.
- Land Grant Extension Education Mara Yborra proposed professional development in public health and research methodology training at Johns Hopkins.

The IRRC is funded by a five year grant from the National Science Foundation (HRD-1839895). The funds helped hire two full time research faculty and an outreach coordinator and set up a sponsored programs office. The new staff plan to work on collaborative projects with UTTC's STEM and Land Grant Programs.



UTTC Environmental Science students, Kimberlee Blevins and Amy Jackson, engage elementary students at the IRRC open house with techniques scientists use to monitor water quality.

Gurjot “Gary” Dhaliwal, a research scientist, and Anna Bahnsen, Tribal Science Outreach Coordinator, helped welcome the public at the open house. “My research focuses on designing useful materials from agricultural products,” says Dhaliwal. “The resulting materials have the added benefits of replacing petroleum-based products, are less toxic, and add additional value to an agricultural producer’s operation.” Research scientist Emily Biggane, who works in environmental toxicology, will join the staff full time this fall after finishing her PhD in Biomedical Sciences at the University of North Dakota.

At the open house, the IRRC staff teamed with Gateway to Science (<https://gatewaytoscience.org/>) and UTTC faculty and students from the pre-engineering, land grant, and environmental science departments. Together they helped provide hands on science activities for the public and students from the Theodore Jameson Elementary School located on UTTC’s campus.



UTTC Environmental Student Lorne Jay and Instructor Levi Bilstock help students investigate circuits and solar powered cars at the IRRC’s open house. Researching sustainable energy solutions is one focus of the IRRC.

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Outreach Brief

The IRRC partners with many different stakeholders to provide trainings and educational programming related to the work and research of the Center.

Gateway to Science STEM Adventure Camp Partnership

This summer the IRRC is excited to host 1st-5th graders for a day of engaging science activities in collaboration with Gateway to Science’s STEM Adventure camp. For more information about the camp contact outreach coordinator Anna Bahnson , abahnson@uttc.edu or visit <https://gatewaytoscience.org/programs/summer-camps/>

ND STEM Ecosystem Stakeholders Meeting

On April 25th, 2019 IRRC Staff Jeremy Guinn and Anna Bahnson met with statewide professionals from Science, Technology, Engineering, and Mathematics related fields to work towards providing high-quality STEM learning experiences for North Dakota students. Anna is working with government and industry professionals, K-20 educators, and career counselors to develop pathways into science related fields for Native American students.



UTTC’s Land Grant department hosted expert Kelpie Wilson of Wilson BioChar Associates for a hands on workshop utilizing charred biomass (biochar) to increase soil carbon to regenerate soil and improve plant productivity. UTTC Instructor Mandy Guinn’s ecology class helped spread biochar on research plots and will be monitoring how the application effects plant growth.

About United Tribes Technical College

United Tribes Technical College in Bismarck, ND provides quality post-secondary education and training and conducts research to enhance knowledge, diversity, and leadership for all indigenous nations.

The IRRIC supports the college's 50 year history of building cultural, educated, and healthy leaders who empower their communities.

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- UTTC President Leander “Russ” McDonald

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