

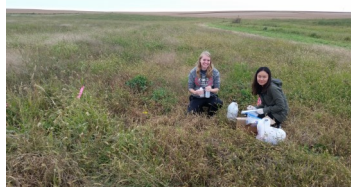
BIOGEEK: The Northwestern College Biology Departmental Newsletter

Volume 4, Issue 1

Winter/Spring 2019

Inside this issue:

Day #1 in the new labs	2
New sequencer for NWC research	3
Red Raider bowling	3
Phage research	3
Match made in Gen Bio	4
Bio department goals	4
Activity corner	4



DeWitt Family Science Center Opens

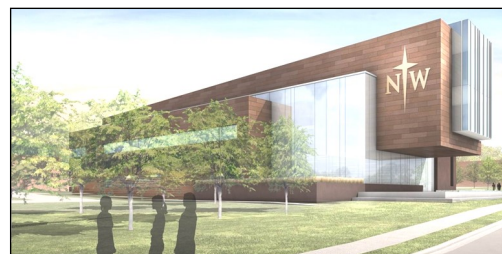
On September 28, 2018, Northwestern celebrated the grand opening of the DeWitt Family Science Center. Built for a total of \$24.5 million, the building is devoted exclusively to the health and natural sciences. Biology, chemistry, and nursing classrooms, laboratories and faculty offices occupy the three floors of the 61,000-square-foot facility. The building also includes a vivarium and a 960-square-foot greenhouse. The science center increases the number, size and flexibility of labs and provides space for long-term experiments, facilitating more faculty-student research. Much of the previous lab space in VPH will be converted to labs for the new PA program, including expansion of the cadaver facilities.

The science center was part of a \$30 million Discover Campaign that also included funds for the building's maintenance, science scholarships, and undergraduate research fellowships. With the opening of the Science Center, Northwestern is able to move its nursing department from an off-campus location into the heart of campus. The nursing floor includes hospital bed stations equipped with human patient simulators, observation rooms for faculty to watch students practice nursing techniques, and the ability to record and review video of students working with different medical scenarios.

The DeWitt Family Science Center is named in honor of Jack and Mary DeWitt of Holland, Mich., who contributed the \$6 million lead gift for the building. Jack DeWitt died June 22, 2018, at the age of 75 after a battle with brain cancer.



Ribbon-cutting ceremony on Sept. 28.



View of west side of DeWitt Family Science Center from Highway 10 in original plans and on March 7, 2019.

NWC Hires Director for New PA program

In December, President Greg Christy announced the appointment of Dr. Alan Laird, MD, of Orange City Area Health Systems, as the first Medical Director of the new Physician Assistant Program, anticipated to start in May 2020. Northwestern College's Master of Science in Physician Assistant Studies (MSPAS) is a 27-month graduate program that provides training for students seeking certification and licensure as a physician assistant (PA).



Day #1 in the new labs



BIO310 Cell Biology



BIO203 Microbiology



BIO/CHE326 Biochemistry: Proteins and Metabolism



BIO115 General Biology



BIO330 Aquatic and Restoration Ecology
(Yes, ecologists use microscopes!)

New DNA Sequencer Enhances Research Opportunities at Northwestern



Biology professor Sara Tolsma explains the use of the Illumina MiSeq DNA sequencer to senior Michaela (Van Riesen) Aulner.

Thanks to the generosity of an anonymous NWC alumnus, Northwestern College is now home to an Illumina MiSeq DNA sequencer. Two Illumina trainers were on campus after Thanksgiving break for a three-day training. During the training, we prepped and sequenced eleven samples of phage genomes that had been previously discovered by NWC students. We are eager to incorporate this state-of-the-art piece of equipment into NWC teaching and research. With the acquisition of the sequencer, Northwestern College has joined the University of Iowa and Iowa State as the only higher education institutions in the state with a gene sequencer.

Bio Prof Named Head Coach of Red Raider Bowling Program

Northwestern College has added bowling and e-sports to their athletic program this spring semester, with the intention of having both men's and women's club teams in 2019-20 and NAIA varsity teams in 2020-21. Dr. Todd Tracy, science professor and USBC-certified bowling coach, is leading the bowling program. Sportsman's Lanes in Hawarden and Sweet 16 Lanes in Le Mars will provide practice and competition venues for Northwestern.



Students Present Bacteriophage Research

On campus in late November, four students presented their honors research projects on bacteriophages. Kristina Sevcik, Peace Preston, and Michaela Aulner described the phages they discovered in a presentation titled *Annotation and Characterization of Three Novel Bacteriophages*, while Emily Geraets (not pictured) presented her research into anti-phage antibody production in a presentation titled *Investigating Mycobacteriophage Cluster Relationships: Characterization of Anti-phage Antibodies*. Sevcik, Preston, and Aulner will be presenting their findings at the Iowa Academy of Science Annual Conference in April. Several other Northwestern students and faculty will be presenting research at the conference as well.



As a regional leader in phage research, Northwestern will be hosting a SEA-PHAGES conference on April 5-6.



Northwestern College
Department of Biology
101 7th St SW
Orange City, IA 51041
Phone: 712.707.7000
<https://www.nwciowa.edu/biology>



@biologyNWC



Northwestern College Biology Dept.

A Match Made in Gen Bio



Alums Hannah (Halloran) Mulder (left) and Jamie Mulder (2nd from left) were lab partners in Gen Bio in Fall 2013 and have been inseparable ever since. They visited campus in February to check out the new science building and to visit Jamie's brother Lane, a current gen bio student. Jamie and Lane's mom, Leanne, also stopped by to visit.

Goals of the Department of Biology

1. **Communicating.** To be an effective biologist, one must possess the ability to communicate with other biologists in a meaningful way. Students will acquire language skills necessary for communicating the world of biology.
2. **Foundational Understanding.** To be an effective biologist, one must have a working knowledge of the fundamental concepts of biology. Students will possess a foundational understanding of biochemistry, biological structures, biological processes, biological diversity, and theories of biological origins that form the framework of biology.
3. **Depth of Understanding.** The field of biology encompasses multiple areas of knowledge. Beyond a foundational understanding of biology, students will develop depth of understanding in an area of biology appropriate to their professional goals.
4. **Critical Thinking.** Advances in biological knowledge are based upon careful experimentation and critical analysis of the data obtained. Students will develop analytical skills which will allow them to derive thoughtful solutions to biological problems. As a practical application of critical thinking, students will be able to design experiments, obtain meaningful data, and interpret those data appropriately to arrive at meaningful conclusions.
5. **Faith and Learning.** The integration of our Christian faith with the discipline of biology is central to being an effective Christian biologist. Students will begin to develop their own integrative worldview, which incorporates their understanding of biology with their theology and experiences of God and His Creation.

Activity Corner

Match the science faculty/staff member with his/her office décor:



- A. David Arnett
- B. Karissa Carlson
- C. Ralph Davis
- D. Laurie Furlong
- E. Elizabeth Heeg
- F. Chad Miller
- G. Byron Noordewier
- H. Sara Tolsma
- I. Todd Tracy
- J. Zachary Varpness

