NDSU | COLLEGE OF ENGINEERING

COLLEGE HAPPENINGS

December 8, 2020

FROM THE DEAN

College Budget Update

As a result of declining enrollments at NDSU, Academic Affairs (which includes the academic colleges) is facing an approximately $4M permanent budget shortfall, effective this academic year. In response, the Provost's Office has assigned to each college a 4.1% across-the-board cut of total appropriated and differential tuition funds. For the College of Engineering, our total appropriated budget is $11,127,961 and our total differential tuition budget is $$2,481,669. So, our total budget cut, effective December 31, 2020, is $557,995 ($456,246 from traditional state appropriated funding and $101,748 from differential tuition revenue). We recently submitted our plan to the Office of the Provost on how we will manage this budget cut. In summary, our plan includes the savings from:

- the elimination of two faculty lines previously filled by Professors Ken Nygard and Val Marinov who took advantage of the Voluntary Separation Incentive Program (VSIP) this academic year,

- savings from the difference between a full professor line that was lost in electrical and computer engineering and a new recruitment at the assistant professor level,

- a significant reduction in College of Engineering operating funds, and

- a 4.1% reduction in differential tuition revenue for each unit.

In anticipation of additional budget reductions down the road, the Office of the Provost is also hiring a consultant to provide an outside, independent perspective with recommendations for academic program prioritization. The final proposals from prospective consultants were due November 30, and a review team has been formed to score the submissions and select the consultant. This program prioritization process is critical for the long-term success of NDSU, and I expect the College of Engineering to benefit from it. By most imaginable metrics that may be evaluated in a program prioritization process (such as student to faculty ratio, research expenditures, student credit hours taught, comparison to similar programs at peer institutions, etc.) programs in the College of Engineering look very good compared to some of the lower performing units across campus.

IN THE NEWS

NDSU dean named AAAS fellow

[Engineering dean named fellow of National Academy of Inventors](#)

[NDSU winter commencement to be virtual ceremony](#)

[Commencement speaker: NDSU means opportunity, growth](#)

[Minot participates in state wastewater testing for COVID-19](#)

[NDSU to hold second annual Toy Adaptathon](#)

[Second-annual toy adaptathon gives back to children in the community](#)

CONGRATULATIONS

Michael Kessler, dean of the NDSU College of Engineering, has been named a fellow of the **American Association for the Advancement of Science** and a fellow of the **National Academy of Inventors**. Kessler is being honored for his contributions to the understanding and development of "self-healing" composites and bio-renewable polymers. Election to NAI Fellow is the highest professional distinction accorded solely to academic inventors.

Several **College of Engineering** students were on the teams that won the Graduate Student and Undergraduate Student categories of this year's **Innovation Challenge**. [Learn more](#).

Please let *College Happenings* know about honors, awards, new grants and other announcements so we can share them with other faculty and staff.

SUPPORTING DIVERSITY

Open letter of support

All NDSU faculty and staff are invited to sign and open letter in support of BIPOC (Black, Indigenous, People of Color) students, faculty, and staff. The letter was prepared by faculty and staff leaders of NDSU Faculty and Staff Senates and the Anti-Racism Coalition.

If you would like to sign, [click here](#).

Anti-Racism Coalition

The Ant-Racism Coalition is a grassroots group of NDSU employees who affirm the value of our BIPOC (Black, Indigenous, People of Color) students and colleagues. ARC is open to any like-minded NDSU employee. [Read more about the group here](#). Please [fill out this form](#) if you would like to join the group.

Community of Respect training

The Office of the Vice Provost for Faculty and Equity will be offering a series of the Community of Respect Trainings via Zoom.

Dates offered will be:

- Module 1, January 20 from 9-11 am
- Module 2, January 27 from 9-11 am
- Module 3, February 3, from 9-11 am
- Module 4, February 10 from 9-11 am

To Register go to follow link: https://www.ndsu.edu/equity/education_and_training/

The objective of the Community of Respect seminar is to teach individual participants about cultural differences and to encourage them to think critically about the impact of their cultural values in their relationships with others. The curriculum is organized into four separate modules with distinct learning outcomes outlined in each.

Safe Zone training

The Office of the Vice Provost for Faculty and Equity will be offering the Safe Zone Training series via Zoom.

Dates offered:

- Level 1, February 17 from 9-11 am
- Level 2, February 24 from 9-11 am
- Level 3, March 3 from 9-11 am

To Register please go to the following link: https://www.ndsu.edu/equity/education_and_training/

Safe Zone is a program designed to:

- Educate people about sexual orientation and gender identity/expression issues.
- Create a visible network of Allies to provide support to the NDSU lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) community.
- Provide accurate information about sexual orientation and gender identity/expression diversity, issues, and resources within the community.

COVID-19 UPDATES

The COVID-19 Faculty Support Ad-hoc Committee has developed a number of recommendations to support faculty in relation to the current pandemic. You can view the recommendations proposed here.

Your feedback is essential before the recommendations are finalized. Please complete this anonymous survey at your earliest convenience and no later than Monday, December 14 to provide feedback on the proposal: https://ndstate.co1.qualtrics.com/jfe/form/SV_aWuxgqhMWP7Z9tz

If you have questions about the recommendations, please contact any member of the ad-hoc committee.

Upcoming Spring Instruction Open Forums

Faculty, staff and other instructors can join the weekly open forums with IT to discuss spring instruction. Please plan to attend if you have any issues with technology in the classrooms.

- Wednesday, December 16, 9:00 a.m. – Dr. Beena Ajmera will discuss HyFlex Experience, https://ndsu.zoom.us/j/98480751985?pwd=QTlJSUlteFpIcjlGNHgrWGIzWjBxZz09

UPCOMING EVENTS

Friday, December 11, **Virtual R01 Grantwriting Bootcamp.** NDSU faculty, staff, and students have access to a FREE half-day virtual grantwriting bootcamp for NIH R01 proposals. Register to Participate.

Tuesday, December 15, **Academic Leaders Series: Managing Budgets**. This workshop with Alan Kallmeyer, Professor and Chair of Mechanical Engineering, will cover the different types of departmental funds, budgeting process, and recommendations for effective and transparent budget management for academic leaders. 11:00 a.m. – 12:30 p.m. via Zoom.

Thursday December 17, **College of Engineering Ring and Pin Ceremony**. This ceremony is a blending of two significant and celebratory events, the Order of the Engineer and the Pledge of the Computing Professional. This semester's ceremony will be held at 5:30 p.m. on Zoom.

Friday, December 18, **NDSU Virtual Winter Commencement Ceremony**. The event will include messages President Dean L. Bresciani, Provost Margaret Fitzgerald, CoE student Darby Beyer and college deans and can be viewed at 10 a.m. on NDSU's commencement website.

Wednesday, January 13, 2021, **NDSU Day of Honor**. NDSU Day of Honor commemorates the lives of NDSU students, faculty, and staff who have passed away during the previous calendar year. The event will be held at 2:30 p.m. via Zoom. If you know of a member of our campus community who died in 2020, please visit the NDSU Day of Honor webpage to complete a submission form.

CAMPUS WIFI COVERAGE SURVEY

Over the next several weeks, NDSU Enterprise Networks along with Marco Networks, an IT Service vendor, will be walking through all buildings on campus to do wireless coverage survey.

Please inform the appropriate people in your offices that you may see individuals with a green and black colored handheld device come through nearly every area on campus, stopping very frequently and interacting with the survey tool. The surveyor will ask if it is acceptable with staff and faculty to enter their offices to survey the WiFi in the office. Surveying each office space is not required, but NDSU IT would like to collect information for all spaces, but only if the timing and situation is acceptable to the office occupant. These individuals will be wearing masks as they enter buildings.

NSF VIRTUAL GRANTS CONFERENCE

The National Science Foundation (NSF) Fall 2020 Grants Conference was offered virtually this year. While the conference has ended, you are able to access session recordings here.

Examples of topics covered at this virtual conference include:

- best practices and tips for grants and grantwriting for NSF;
- merit review;
- new programs and initiatives;
- crosscutting programs like the NSF CAREER award and Research Experiences for Undergraduates;
- incorporating international components into NSF proposals;
- interdisciplinarity and convergence; and
- NSF's new proposal submission system, Research.gov.

FUNDING OPPORTUNITIES

Early Career / New Investigator Opportunities

Multiple early investigator funding programs currently have open solicitations. These programs exist to provide research and career development opportunities for early career faculty. Details on eligibility requirements can be found in the respective solicitations. If you have any questions about eligibility, please contact ndsu.researchdev@ndsu.edu.

Early Career / New Investigator Programs with Open Solicitations:

- NIH Stephen I. Katz ESI Research Grant Program
  Deadline: January 26, 2021

- [DOE Early Career Research Program](#)
  Deadline: February 15, 2021
- [USDA-NIFA New Investigator Grants](#)
  Deadlines vary
- [NSF CAREER Program](#)
  Deadline: July 26, 2021

Wisconsin Highway Research Program

The Wisconsin Highway Research Program (WHRP) has issued the following requests for proposals (RFPs) to be funded in federal fiscal year 2022:

- [Improving Bridge Concrete Overlay Performance](#)
- [Field Investigation of Dowel and Tie Bar Placement](#)
- [Timely and Uniform Application of Curing Materials](#)
- [Balanced Mixture Design Pilot and Field Test Sections](#)
- [Weight-Volume Relationships and Conversions Factors for Soils and Aggregates of Wisconsin](#)
- [Wind-Loaded Structures](#)

WisDOT accepts proposals from out of state.

RECENTLY SUBMITTED PROPOSALS

- Changhui Yan (PI). A real-time early-warning system for COVID-19. $45,994 from the University of Nebraska Medical Center. 01/01/2021 – 06/30/2021.
- Anne Denton (CPI). The AgroAI Institute: Intelligently Transforming Agriculture and Food in a Changing World. $750,000 from the University of Minnesota. 09/01/2021 – 08/31/2026.
- Long Jiang (PI). Cottonseed Oil Based Vitrimers for 3D Printing and Other Applications. $56,383 from Cotton Incorporated. 01/01/2021 – 12/31/2021.
- Yan Zhang (PI). An Integrated Study of Fluid-Structure Interaction Associated with Risks of Jugular Vein Stasis in Microgravity. $130,802 from the National Aeronautics and Space Administration. 09/01/2021 – 08/31/2022.

RECENT PUBLICATIONS

For 2020, 161 publications by authors with the College of Engineering affiliation have appeared in various journals, according to the ISI Web of Science and submissions from faculty. Here are some of the most recent publications:

- Ama, Obinna, Mahek Sadiq, Michael Johnson, Qifeng Zhang, and Danling Wang. 2020. "Novel 1D/2D KWO/Ti3C2Tx Nanocomposite-Based Acetone Sensor for Diabetes Prevention and Monitoring." *Chemosensors* 8 (4): 102. https://doi.org/10.3390/chemosensors8040102.
- Ringwelski, Beth, Vidura Jayasooriya, and Dharmakeerthi Nawarathna. 2021. "Dielectrophoretic High-Purity Isolation of Primary T-Cells in Samples Contaminated with Leukemia Cells, for Biomanufacturing of Therapeutic CAR T-Cells." *Journal of Physics D-Applied Physics* 54 (6): 065402. https://doi.org/10.1088/1361-6463/abc2f3.
- Sadiq, Mahek, Lizhi Pang, Michael Johnson, Venkatachalem Sathish, and Danling Wang. 2020. "2D Nanomaterial, Ti3C2 MXene-Based Sensor to Guide Lung Cancer Therapy and Management." *Proceedings* 60 (1): 29. https://doi.org/10.3390/IECB2020-07055.
- Thapa, Keshab B., Kalpana S. Katti, and Dinesh R. Katti. 2020. "Compression of Na-Montmorillonite Swelling Clay Interlayer Is Influenced by Fluid Polarity: A Steered Molecular Dynamics Study." *Langmuir* 36 (40): 11742– 53. https://doi.org/10.1021/acs.langmuir.0c01412.

- Zafar, Sarim, Muhammad Usman Sarwar, Saeed Salem, and Muhammad Zubair Malik. 2020. "Language and Obfuscation Oblivious Source Code Authorship Attribution." *IEEE Access* 8: 197581–96. https://doi.org/10.1109/ACCESS.2020.3034932.

See your name on this list? Help us get the word out about your amazing work by submitting it as a **Breakthrough Alert**. **This online form** is an easy, step-by-step guide for summarizing published research for the general public.

College Happenings is distributed to the NDSU College of Engineering staff and faculty every other Tuesday.

Read past issues of *College Happenings* here.

Deadline for submissions to *College Happenings* is 12:00 p.m. Fridays.

Contact kyle.bosch@ndsu.edu to submit items for *College Happenings.*

Follow the College of Engineering on social media.