Advancing UMN Climate Action via Research and Teaching Session
2023

CAP: Academic Research/Curriculum on Commuting (transportation)
*What could/should we be doing:*
- Coordinate ride sharing
- Analysis of commuting on each campus and [analyze how an] impact of interventions [could help]

CAP: Academic Research/Curriculum on travel
*What could/should we be doing:*
- Incentivise departments to have virtual speaker series and zoomed in visiting lecturers (maybe w/ an internal carbon tax)

CAP: Academic Research/Curriculum on Fleet
*What could/should we be doing?*
- Analysis of efficiencies and transitions
- Create a method to communicate what research we are producing- what are we doing on campus?

CAP: Academic Research/Curriculum on Energy Supply
*What are we doing*
- Law professor James Coleman researchers legal barriers to energy transmission of project approval

*What could/should we be doing*
- Internships w/energy management

CAP: Academic Research/Curriculum on Energy Demand
*What are we doing?*
- Capstone projects for external clients on efficiency within classes
- UMN Clean Energy Leaders
- Research @ Morris around supply and efficiency
- Plan built environment w/adaptation in mind and utilizing future climate models
- Tap into Dr. Roop and find chances for partnership with CSBR; long-term, institutional studies

*What could we be doing?*
- Energy use kiosk in IonE could be leveraged for student use or projects
- Identify internal projects for analysis
- Internships with energy management
- Student projects around efficiency within the building they are studying in
- IRA funds to cover incremental costs for novel tech
- Teaching and learning department. do assignment creation and can connect curriculum changes
Misc. Notes
- Linking commuting engagement to tenure processes + other academic incentive systems
- What we do on campus influences surrounding communities- openness to new ideas through proof of concept
- What happens in rural MN deeply impacts urban areas
  - Interconnected visions
- What is a positive rural future? How does the U contribute?
- Learning on campus = community
- Need research to answer key questions: agriculture + GHG emissions
- R + D solutions -> how to connect practical deployment
- Can UMN connect policy, tech, and economics to determine what is best to grow on the land
- We need the UofM to assist w/basic questions- importance of rural MN
- Create an easy way to find who teaches courses on environmental issues- could be used to find ways to collaborate with lectures, field trips, pedagogy, etc.
- Database of current environmental resources
- Cultural sustainability, oral history, database for small towns

Academic Alignment/ Exploration with Operations
What are we doing?
Core curriculum will have ~7000 students focused on the SDGs looking for projects. Capstone project structure can be leveraged
- Sustainability minor
- Internship course
- Ready made modules w/lesson plan & faculty contact info
- Field trips to Sarita Wetland- C. Lenhart
- New SUST 3480 cours- connecting students to cap through peer-peer education

What could/should we be doing?
- Inventory of courses w/relevant student projects
- Coordinator to connect faculty and operations
- Landscape analysis of current course offerings and identifying gaps
- Awareness of operations work.
- Creation of “climate affiliates group with rep from operations faculty”
- Karthik Natarajan- sustainable supply chain SCO 6094
Funding Opps. for Campus as a Living Lab

*What could/should we be doing?*

- Ability to certify students for controlled burn permitting
- “So I’m wondering how we could broaden the notion of living lab to include all the ways we interact with students. What if we re-imagine all system/campus communities as living labs in which all interactions with students are all/each seen as opportunities to move towards sustainability? How would that stance shift how would we work/teach” - Suki Mozenter UMD
- Embrace carbon sequestration … at cedar creek
- Fruit trees- edible landscapes
- Native/indigenous learning around plants as medicine
- Trees adapting to changing climate
- Telling the story of native landscapes to visitors and students
- Native planning creative buffer space for organic plots
- Sequestration of carbon/measure this
- Concern about water quality/quantity
- Opportunities to reduce lawn footprints
- Create living lab out of Sarita area
- Research inventories of insects
- Field classes: reduce barriers to study and travel to the site
- Bell job does a nice job of natural learning

Faculty Tools & Support Integrating Climate Action into Research and Teaching

*What are we doing?*

- Michelle Garvey is a resource on climate action via climate justice

*What are we doing?*

- Faculty climate literacy training
- Climate action gen ed requirement
- Finding ways to incorporate climate education and action in teacher education across disciples
- Does FM have dedicated libraries
- Librarian help with research for campus project background info