

Carl G. Schwenk Endowed Faculty Fellow in Applied Geophysics Annual Report 2023-2024

The Carl G. Schwenk Faculty Fellow Endowment continued to support the geophysical education research in the Department of Geological and Mining Engineering and Sciences. One of the key areas of its impact is in GE4090 Field Geophysics, a required course for Geological Engineering, Geology, and Applied Geophysics majors. Students gain hands-on experience with specialized equipment utilized for gravity, magnetic, seismic refraction, ground penetrating radar, electrical resistivity, and electromagnetic surveys. A class such as this is offered at only a handful of institutions in the country.

Maintaining and updating the suite of equipment necessary for such a diverse, hands-on class is financially challenging. I am excited to announce that the endowment recently supported the purchase of a state-of-the-art airborne magnetometer that will be deployed with an unmanned aircraft system. The magnetometer will provide students with a unique opportunity to use the latest technology in airborne mapping of hard-to-reach areas as well as the merging of ground-based surveys to demonstrate how the induced fields of subsurface magnetic bodies change with distance. This magnetometer will also support on-going local and regional geologic mapping projects in the U.P.



Sadly, Mr. Schwenk passed away in December, 2022. Our department, myself, and current and future students will forever be grateful for his lasting contribution to the educational experience at his alma mater, Michigan Tech.