

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Arts, Sciences, and Letters

Jacob A. Napieralski, associate professor of geology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters is recommended for promotion to professor of geology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Academic Degrees:

Ph.D.	2005	Purdue University, Glacial Geology and GIS, Earth and Atmospheric Sciences, West Lafayette, IN
M.S.	2002	Buffalo State College, Environmental Research and Education, Great Lakes Research Center, Buffalo, NY
B.S.	1999	Buffalo State College, Earth Science, Department of Geology, Buffalo, NY

Professional Record:

2011 – present	Associate Professor of Geology, University of Michigan-Dearborn
2012	United States Fulbright Scholar
2005 – 2011	Assistant Professor of Geology, University of Michigan-Dearborn
2002 – 2015	United States GAANN Fellow

Summary of Evaluation:

Teaching: Professor Napieralski's teaching is ranked as excellent. He integrates his engaging teaching philosophy and learning strategies throughout all his courses. Professor Napieralski identifies ten core components in the design and implementation of his courses: inquiry, critical thinking, group experiences, reflection on the learning process, experiential learning outside of the lecture classroom, and recognition of the variation of learning styles among our students. Using this approach, he superbly aligns the course's specific learning objectives and assessment tools embracing a thoughtful and analytical strategy towards undergraduate learning. Highly noteworthy, he continues to expand field course opportunities, taking students to Iceland, Puerto Rico, and Cyprus knitting cross-cultural experiences and geological studies in a coherent learning and life experience. He plays a fundamental role in curriculum innovation and initiatives in Geology and Environmental Sciences/Studies in Natural Sciences. One excellent example is his many efforts to disseminate the use of GIS emphasizing its breadth and application in both the undergraduate experience and the world of work. Class student evaluations are highly praiseworthy and enthusiastically rated the 'best ever.' Professor Napieralski's efforts will continue to stimulate, engage, and encourage University of Michigan-Dearborn students by his outstanding and ongoing commitment to our departmental and institutional mission. His contribution to our students' education extends beyond the teaching of courses to the enhancement of the Geospatial Analysis and Mapping (GAM) Certificate and development the GAM laboratory with external support for the establishment of an endowment. Service learning in off-campus opportunities and engagement with the Office of Metropolitan Impact is an additional hallmark of his commitment to higher education in southeast Michigan.

Research: Professor Napieralski's research is ranked significantly capable. Since his last promotion, he published nine peer reviewed papers, above the norm in promotions from the Department of Natural Sciences. Because he publishes in emerging areas, the number citations of his recent work

are just beginning to accumulate. Several of the publications focus on new and very significant revelations on the impact of historical urbanization and coincident stream burial, resulting in the many environmental problems of today's Detroit metropolitan area. Professor Napieralski's chapter in Treatise in Geomorphology is considered an authoritative assessment in current and future geospatial applications, applying theories of geomorphology. He has authored or co-authored presentations at 17 local, national, and international conferences since 2011, most attended by his students. In 2012, Professor Napieralski was awarded the very prestigious award: a U.S. Fulbright Research Scholar with the Geological Survey Department of Cyprus, where he collaborated on a soil and water conservation project with international colleagues. Since his promotion to associate professor, Professor Napieralski sought internal and external funding to support his research. Successful as a principle investigator and a co-PI on five grants since 2011 totaling \$122,000, this indicating his willingness to engage across disciplines and departments to solve significant questions of our modern world. The significance of his role in diverse and multiple authorship situations reflects his professional and collaborative sensibility when pursuing research, as well as teaching. Professor Napieralski has collaborated successfully with faculty outside the Department of Natural Sciences, including Paul Draus in Behavioral Sciences and Juliette Roddy in Social Sciences and Health and Human Services. He also received \$8,400 in instructional equipment and software grants that have assisted in supporting his teaching, research, and graduate student research. In summary, Professor Napieralski is a strong, active, and collaborative researcher in the Natural Sciences and campus community. His scholarly activity is also a model in the teacher/scholar model employed by the College of Arts, Sciences, and Letters. One can easily predict his future productivity and contributions to the discipline, the unit, and the university will continue at a good pace as he continues to engage our learning community.

Recent and Significant Publications: (*undergraduate authors/coauthors)

- Napieralski, J. and *Welsh, E. Mapping a century of stream burial in Michigan (USA) cities. *Journal of Maps*, (201)6. <http://dx.doi.org/10.1080/17445647.2016.1206040>.
- Napieralski, J. and *Carvalheas, T. (2016). Urban stream deserts: Mapping a detrimental legacy of urbanization in the United States. *Applied Geography*, 67, 129-139.
- *Bastian, E. and Napieralski, J. (2016). Suburban Food Security: Walkability and Nutritional Access in Metropolitan Detroit. *The Professional Geographer*, 68 (3), 462-474.
- Napieralski, J. 2016. What piece of the Earth Puzzle will you work on? In: Badger, R., Guth, A. L., Napieralski, J., Sui, D., Vaidya, K., and Suteanu, C. (Eds) Geology for the Curious: Why Study Geology? (A Decision-Making Guide to College Majors, Research & Scholarships, and Career Success for Students, Educators, and Parents), The Curious Academic Publishing; First Edition.
- Napieralski, J., *Keeling, R., *Dziaken, M., *Rhodes, C., *Kelly, A., and *Kobberstad, K. 2015. Urban Stream Deserts as a Consequence of Excess Stream Burial in Urban Watersheds. *Annals of the Association of American Geographers* 105 (4), 649-664.
- Napieralski, J., Barr, I., Kamp, U., Kervyn, M., (2013). Remote sensing and GI Science in geomorphological and landform mapping. In: Shroder, J. (Editor in Chief), Bishop, M.P. (Editor), *Treatise on Geomorphology*. Academic Press, San Diego, CA, vol. 3, Remote Sensing and GI Science in Geomorphology, pp. 187-227.
- Napieralski, J. (2012). GIS in Glaciology. In: Singh, V. P., Singh, P., and Haritashya, U. (Editors) Encyclopedia of Snow, Ice and Glaciers, Springer Publishing, 325-328.
- Murray, K., Napieralski, J., Luera, G., Thomas-Brown, K., and Keefer, L.R. (2012). Broadening diversity in the geosciences through teacher-student workshops that emphasize community-based research projects. *Journal of Geoscience Education*, 60, 179-188.

Napieralski, J. and *Nalepa, N. (2012). Optimizing geomorphometry using statistical process control methods. *Process Control: Problems, Techniques and Applications*. In: Werther, S.P. (Editor), Process Control: Problems, Techniques and Applications, Nova Science Publishers, Inc., pp. 111 -126.

Service: Professor Napieralski's on-campus service work includes substantial efforts in university-wide, collegiate, and department committees of importance including work on the Higher Learning Commission Criteria 4 Subcommittee, the CASL Strategic Planning Steering Committee, and Natural Sciences Program Committees for Earth and Environmental Sciences. As the director of the Geospatial Analysis and Mapping (GAM) Program and the inaugural Manager of the GAM Laboratory, he consistently demonstrates strategic leadership in building the reputations of both the GIS program and the lab throughout the region and beyond. In doing so, he has established effective relationships with key community agencies and organizations in the Metropolitan Detroit area like ACCESS, Southwest Solutions, FOCUS: Hope and Detroit Future City where the techniques of geospatial analysis and mapping can have important and salutary impacts when properly applied to issues of economic, political, and educational disparity and equity in the region. This commitment of time and talent involving individual initiative, as well as collaboration with members of the Office of Metropolitan Impact, led to the development of external funding opportunities and donor philanthropy benefiting our students and providing an important funding impetus for GAM Lab operations. This record of service offers an outstanding example of faculty engagement that embraces the university's Metropolitan Vision and Mission, one that may serve as a model to be emulated by others of your colleagues across the campus. For professional service, Professor Napieralski currently serves as an editor for the *International Journal of Earth and Environmental Science* and regularly provides manuscript reviews for other leading journals like the *Journal of Spatial Science*, the *International Journal of Geographic Information Science*, and *Global Change Biology*. He organized and/or chaired several special sessions on brownfield remediation and curriculum enhancements in the geosciences during the recent meeting for the Association of American Geographers, and he served as a review panelist for the NSF in areas involving arctic science and geography and regional science.

External Reviewers:

Reviewer A: "Dr. Napieralski is a dedicated, productive and valuable asset to the Department of Natural Sciences. He has demonstrated to me a quality rather than a quantity of scholarship. His research is solid, involves students and I expect that it will continue at similar levels in the future."

Reviewer B: "Dr. Napieralski has an outstanding research record that includes numerous publications in top journals, presentations at regional, national, and international meetings, and demonstrated service to the discipline."

Reviewer C: "Dr. Napieralski's scientific research is diverse, creative and original. He is among a small number of researchers who has focused their research on the interface between the human and the physical environments. This is a critical issue on many fronts – theoretical, management, restoration, conservation – and one of the new emerging topics in fluvial systems."


Reviewer D: "The body of scholarly work considered is excellent, as it represents innovation multi-disciplinary approaches, solid experimental designs, methods, and well-considered conclusions. As a result, these efforts have contributed significantly to disciplines of geography, geomorphology, urban hydrology, and GIS."


Reviewer E: "In summary, Dr. Napieralski is a productive academic and a well-established teacher, and is contributing to the profession by helping to advance our knowledge of spatial and temporal aspects of geoscience."

Reviewer F: "I am impressed by the quantity of work that Dr. Napieralski has done in the past five [sic] years and believe that this exceeds the general UM-D and UMD-DNS standards. In addition, Dr. Napieralski's work is nicely focused on applying GIS to study natural earth processes, how to teach about these, and how humans impact these. This seems like an excellent match for the needs of your multidisciplinary department and your diverse and urban students."

Summary of Recommendation:

Professor Napieralski is both an excellent teacher and scholar. His research is thoughtful, collaborative, and seeks to understand the complex integration of the worlds of geology and the environment, all within the context of the historical, present, and future influences of urbanization. Professor Napieralski energizes students and faculty alike, as he addresses the central mission of the Department of Natural Sciences, to engage all in collaborative research/scholarly projects. Reflecting on teaching, in traditional, online, and field classes, Natural Sciences colleagues greatly value his many contributions in the classroom, discipline, department, and the campus community. He has made substantial service contributions, quite valuable to his department, college, our university and his profession. Further, Professor Napieralski's professional service is outstanding and reflects well on our institution and our reputation. We are pleased to recommend, with strong support of the College of Arts, Sciences, and Letters Executive Committee, Jacob A. Napieralski for promotion to professor of geology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.


Martin J. Hershey, Dean
College of Arts, Sciences, and Letters


Daniel Little, Chancellor
University of Michigan-Dearborn

May 2017