

Narrative Academic Resume-Russ Colson

Education

Dr. Colson earned a B.S. in Geology from the University of Kansas in 1981 and a Ph.D. in Geological Sciences from the University of Tennessee in 1986. He minored in metallurgical engineering.

Teaching

Dr. Colson taught at MSUM from 1993 to 2023 with his teaching characterized by course variety and experiential focus. He developed and taught twenty-four undergraduate courses and three graduate courses for science teachers. Several courses are adapted to special interdisciplinary needs, such as a geochemistry course tailored for archaeology majors and several courses for in-service and pre-service teachers. All of his courses included lab or field components and six had separate lab sections, which he also taught. After earning the rank of full professor, he continued to develop new experiential opportunities, such as a variety of two-day field trips, a ten-hour computer-based planetary lab, and an educational activity on volcanoes published in the *Journal of Geoscience Education*. He presented at numerous education conferences, including invited presentations, and wrote a book of activities and classroom stories published by NSTA Press in 2016. Prior to MSUM, he taught introductory courses as an adjunct instructor at Washington University in St. Louis and introductory geology labs at the University of Tennessee. He is a former CASE U.S. Professor of the Year Nominee (2000) and a national winner of the CASE U.S. Professor of the Year award (2010).

Service

Dr. Colson was hired in 1993 to teach service geology courses at MSUM, which had no existing geology faculty or program. He developed courses supporting several majors, purchased supplies, and designed class lab facilities. He proposed an earth science minor in the mid 1990's, developed majors in Geosciences and Earth Science Teaching in the early 2000s and majors in Environmental Geology, Environmental Geography and Water Quality Science (Certificate) in the early 2020s. He served three years as chair of the Department of Geology and Geography and later three years as chair of the department of Anthropology and Earth Science. He served on a variety of university committees engaged with student education, including the liberal studies committee (chair) and the committee to evaluate liberal studies science curriculum (chair). He served on the AABAC committee for a year, as the director of the transforming teacher education program for three years. He edited two editions of the geosciences alumni newsletter. He served as coordinator of the earth science teaching program for more than 20 years and on many teacher education committees and the honors program.

Research

After two years research at the Johnson Space Center in Houston and six at Washington University in St. Louis, Dr. Colson's research at MSUM exclusively involved undergraduate participation. With grant funding from NASA, he developed an experimental petrology laboratory at MSUM, one of the few in the country that used electrochemical methods to study molten rocks. This lab is well suited to meaningful under-graduate contribution. Through support from the university and a donation from Corning, Dr. Colson brought in a working electron microprobe, the only school in our region where undergraduates could work with this versatile instrument. His students gave many research presentations both at national and regional meetings and at MSUM's on-campus undergraduate academic conference. This experience has helped many students get into jobs or graduate school. Dr. Colson twice received the university's top award for research involving undergraduates.

Educational outreach

Dr. Colson worked in educational outreach throughout his career. He taught many teacher workshops, and made dozens of presentations on dinosaurs, planets, and rocks to elementary kids. He participated in a variety of youth science activities including Science Olympiad, a science challenge for high school and junior high students, college for kids, and others. He authored an earth science web page that is listed on a number of teacher resource websites. He is editor for the online magazine *Issues in Earth Science*, which publishes essays, short stories, and teacher resources for use in the earth science classroom. He is coauthor of the NSTA Press book, *Learning to Read the Earth and Sky*, and author of two online self-study courses for science teachers: Earth Science Essentials (ESE) and Earth Science Extras (ESE2).