

SIUE's Locke Brings STEM Education to Indonesia

October 25 2019 9:39 AM



EDWARDSVILLE – Southern Illinois University Edwardsville STEM Center Director Sharon Locke, PhD, helped bring an understanding of STEM (science, technology, engineering and math) education to Indonesia during two weeks in October. She was invited to three institutions to present on the history and theory of STEM education, while providing hands-on learning activities for faculty members and university undergraduate students.

“STEM education is an area of tremendous interest in Indonesia and other southeast Asian countries,” said Locke, an associate professor in environmental sciences.

“University faculty members are trying to understand how they might integrate STEM lessons into schools and into training for pre-service science and math teachers.”

At the Southeast Asian Ministers of Education Organization (SEAMEO) Regional Centre for Quality Improvement of Teacher and Education Personnel (QITEP) in Mathematics (SEAQiM), in Yogyakarta, Locke presented workshops on teaching STEM as part of mathematics courses to 30 junior high school teachers from Indonesia as well as Laos, Thailand, Myanmar and East Timor. The SEAQiM Center in Mathematics is one of 26 centers across southeast Asia.

“I used practical lessons that show how STEM education integrates each of the four disciplines,” Locke said. “The activities used simple materials that could be easily obtained locally, so that educators could use them with their own students. One example was building a chair out of only newspaper and tape, which includes concepts of geometry, forces and human anatomy.”

At Sunan Kalijaga University, Locke presented a practical STEM activity for faculty members and undergraduate pre-service teachers. At Sanata Dharma University, she provided a half-day workshop for science and math teachers, a lecture and lesson on STEM for undergraduate pre-service teachers, and a workshop for science and mathematics faculty.

“Everyone I met was incredibly welcoming and excited to learn about STEM,” Locke said. “I am honored to have represented SIUE in promoting STEM education at an international level. Through our projects, STEM Center faculty and staff are developing valuable teaching resources to support STEM learning.”

In fall 2018, the SIUE STEM Center hosted ASEAN Fulbright Scholar Rusassmita Sri Padmi from SEAQiM for three months of research. Locke’s trip to Indonesia helped strengthen the relationship between SIUE STEM and SEAQiM.

Southern Illinois University Edwardsville provides students with a high quality, affordable education that prepares them for successful careers and lives of purpose to shape a changing world. Built on the foundation of a broad-based liberal education, and enhanced by hands-on research and real-world experiences, the academic preparation SIUE students receive equips them to thrive in the global marketplace and make our communities better places to live. Situated on 2,660 acres of beautiful woodland atop the bluffs overlooking the natural beauty of the Mississippi River’s rich bottomland and only a short drive from downtown St. Louis, the SIUE campus is home to a diverse student body of more than 13,000.

