

**Western Michigan University Collaborative Effort of College of Education and  
College of Engineering and Applied Sciences to Enhance Student Learning**

**Funded by National Science Foundation Bridges for Engineering Education Program**

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Western Michigan University (WMU) was represented at the inaugural **Taking the Lead: A Deans Summit on Technological Literacy** held October 1-2, 2001 in Baltimore, MD, which was supported by grants from the National Science Foundation (NSF) and the United Engineering Foundation. Nearly 50 pairs of deans of education and engineering convened to discuss the new requirements for the preparation of teachers in mathematics, science, engineering and technology, and the needs that arise as a consequence. In response to the challenges raised at the Deans Summit, WMU seeks the support of the National Science Foundation Bridges for Engineering Education (BEE) program to plan and pilot initiatives that provide opportunities for increased interaction among education and engineering faculty and students to address the challenges that were raised at the Deans Summit.

The objectives of the proposed project are: 1) Faculty of Colleges of Education and Engineering Jointly Design an —Introduction to Engineering“ course for Engineering and Education Students resulting in improved learning; 2) Faculty of Colleges of Education and Engineering jointly hold seminar and workshop to enhance collaboration, including visits to and visits from representatives of model collaboration programs; and 3) A Recognition Program to recognize excellence in collaboration to improve teaching and learning in engineering.

The needs that will be addressed in the proposal project are: (1) the need to enhance technological literacy of future teachers and to train pre-service education students in the use of stimulating examples of real-world engineering and technology to teach mathematics and science to K-12 students; (2) the need of a stimulating first-year engineering course to improve retention of first-year engineering students, and (3) practical solutions to overcome barriers to collaboration between the colleges of education and engineering.