

Developing Leadership and Innovation in Engineering Students Through Undergraduate Courses in Applied Electromagnetics Built Upon Novel Education Concepts (NSF)

Funding Agency:

National Science Foundation (NSF)

Contact Person:

Dmitriy Garmatyuk
Assistant Professor
Electrical & Computer Engineering
Miami University
Phone: 513-529-0754
E-mail: garmatd@muohio.edu

Evaluation:

2 Years
\$25,200

Ohio's Evaluation and Assessment Center for Mathematics and Science Education (E & A Center) is serving as the evaluator for Developing Leadership and Innovation in Engineering Students Through Undergraduate Courses in Applied Electromagnetics Built Upon Novel Education Concepts. This project will provide innovative engineering curriculum with respect to the topic of Applied Electromagnetics (EM). The E & A Center will evaluate how well the project reaches its goals of (a) designing an introductory, one-semester course of applied EM; (b) designing clear measurement and analysis mechanism for gauging student's

motivation, proactive attitude, and creativity during the course; (c) designing an advanced EM course based upon the introductory one; and (d) performing a thorough analysis of students' opinions, progress, and aptitude that results from the initiatives in order to make recommendations to the larger academic community.

The evaluation will focus on the collection of attitudinal data with regard to course components and the collection of test data to emphasize new curricular class components. This assessment will be conducted through a series of questionnaires and course content examinations.

This project is currently being evaluated and results are inconclusive.

This evaluation reinforces the E & A Center's ability to interpret and measure student perceptions in diverse academic curriculum.