



Ray C. Anderson Foundation: Sustainable Engineering Curriculum

THE PROBLEM Sustainability is not integrated into most general engineering curricula. If engineering graduates don't take sustainability principles into consideration when creating new products, this often results in a significant waste of materials, water and fuels.

THE PARTNER The Ray C. Anderson Foundation

THE SERVICE Design of a trans-disciplinary educational curriculum combining engineering design with sustainability.

THE SOLUTION Two existing student capstone experiences were combined into a single collaborative student capstone, integrating sustainability into the engineering design process and adding sustainability students to engineering capstone teams. The course, which became a "real world" experience by working on a sustainable packaging challenge for Dell, was taught to over 180 students.

THE OUTLOOK Pre- and post-course surveys were given to assess shifts in engineering student attitudes toward sustainability. The post surveys revealed that students, as a result of the class, agreed more strongly that sustainability is important and must be more integral to the engineering design process.

“This ASU project executed under our Grey Notes grants program demonstrates the feasibility and value of including concepts in the engineering curricula such as The Interface Model pioneered by Ray C. Anderson at Interface carpets. It is critical that all disciplines understand the demands on our resources and how to implement more resource effective solutions. Education programs such as this point the way.”

John C. Lanier, Director, Ray C. Anderson Foundation