EXTREME
design for extreme affordability

STANFORD
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HUMAN VALUES + ENGINEERING + BUSINESS = INNOVATIVE SOLUTIONS

Design for Extreme Affordability

Stanford Students Innovate in Developing Economies

Design for Extreme Affordability is a two-quarter course offered by the Hasso Plattner Institute of Design at Stanford through the Graduate School of Business and the School of Mechanical Engineering. This multidisciplinary project-based experience creates an enabling environment in which students learn to design products and services that will change the lives of the world's poorest citizens. Students work directly with course partner organizations on real world problems, the culmination of which is actual implementation of solutions and real change.

Over the past ten years, student teams have worked with 27 partner organizations in 18 countries on solutions in the areas of agriculture, architecture, energy, food processing, irrigation, lighting, medical devices, nutrition, sanitation, stove technology and water catchment and purification. Post-Extreme, solutions create impact either through implementation by the partner organization, new independent student-led organizations, or another appropriate organization. Here are a few recent Extreme projects:

Each year, 20 million premature and low-birth-weight babies are born. In developing countries, mortality for these infants is particularly high because incubators are extremely rare. *Design That Matters* challenged the students to design a better incubator for the developing world. The **Embrace** incubator is small and light, making it easy and inexpensive to transport to rural villages.

A third of the world's population suffers from water scarcity. Without access to affordable water efficient irrigation, small-plot farmers are unable to grow crops during much of the year to support their families. *International Development Enterprises Ethiopia (IDE)* challenged the students to make drip irrigation appropriate and accessible to small-plot farmers. **Driptech** irrigation systems offer the benefits of traditional commercial drip irrigation with additional features optimized for one acre plots.

Visit extreme.stanford.edu to learn more about the course and student projects.