

<b>Project Id</b>	110
<b>Project Title</b>	Solar Concentrator for Developing Countries
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<b>Additional Faculty</b>	I am interested in sharing work with collaborators
<b>Faculty Department</b>	Physics
<b>Project Description</b>	<p>We have been developing a novel solar concentrator with the potential of being very inexpensive. We have modeled the design on computers and have begun construction on a prototype. We foresee using this concentrator in developing countries for cooking and possibly to power electrical turbines. The technical work is presently being supported by C3RP funding, while students in UNIV 391 (appropriate technologies for impoverished communities) are building partnerships with communities in Mexico where we hope to visit next summer. Continued research will involve ways to minimize costs by means of optimization of manufacturing processes, and utilization of labor and resources that are available at the implementation site, as well as to build collaboration with our target communities in developing countries. We seek three students with backgrounds that include physics, IME, EE, MATE, and Business, as well as the arts. Students of any discipline who are interested in the project are invited.</p> <p>Project development not only requires expertise across all technical disciplines, but additionally incorporates economic, business, and social aspects for designing, manufacturing and effectively disseminating a product that is appropriately of use to the consumer. This holistic, integrated, cross-disciplinary approach to invention represents a new priority in present industry; one which students will find rewarding – both in the learning process and in future professional opportunities.</p>
<b>Interdisciplinary Nature Description</b>	The project involves science, engineering, sociology, and business. The students will work with physics research students and engineers on the technical side, and be required to bridge cultural gaps to build a working collaboration with a community in Mexico or another developing country. On the business side, students, we will conduct life cycle cost comparisons.
<b>Links</b>	
<b>Number of Honors Students Requested</b>	3
<b>Applicable Majors</b>	ENGR, SOCS, SPAN, PHYS, ENVE, BUS, IME
<b>desired_res</b>	I am looking for students who work well in groups.
<b>Date Added</b>	2008-10-19 20:40:48
<b>Active</b>	1