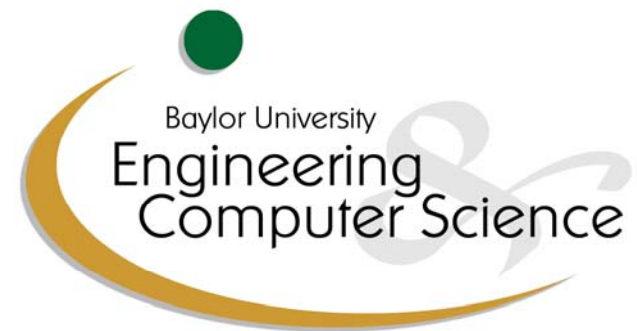


Masters Degree with Opportunities in Appropriate Technology for Developing Countries

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Focus

- Practice oriented students (as distinct from research oriented students) who want to get advanced training in engineering with a vocational slant.
- Distinction will be in type of thesis project selected (more applied than discovery oriented) and the opportunity to replace some engineering courses with courses in international studies, international business, etc..

Degree Requirements

Master of Engineering—EE,ME,BME

- 33 credit hours required
- Thesis project for 3-6 credit hours depending on the scope of project
- Coursework 27-30 credits
 - 15 credits must be taken in engineering
 - Up to 15 credits may be taken outside of engineering

Appropriate Technology Emphasis

- One or more senior elective/graduate courses to be developed on AT or sustainability related topics
- AT and sustainability related thesis projects
 - Current Example: Explore possibility of using coconut oil (possibly with refining) as a substitute for diesel fuel (huge benefit for South Seas Islands such as Papua New Guinea)

Universities with Appropriate Technology for Developing Countries Opportunities

- University of Colorado at Boulder (undergraduate, graduate, CE)
- University of Dayton (undergrad, graduate, ME)
- Colorado School of Mines (Undergrad)
- Messiah College (undergraduate, ME/EE)
- Drexel University (undergraduate, BSAT)

U. Of Colorado: Engineering for Developing Communities™

- *“The overall mission of the Engineering for Developing Communities (EDC) program is to educate globally responsible students who can offer sustainable and appropriate solutions to the endemic problems faced by developing communities worldwide (including the US).”*
- Grad track – 2004, Undergrad Option – 2005 in Civil Eng.

Colorado School of Mines: Humanitarian Engineering

- *“In the past, engineers may have asked, “How do I generate electricity most efficiently?” The humanitarian engineer asks, “How can I help to reduce poverty?” The answer to his question may include generating electricity, but more importantly, Humanitarian Engineers will try to balance technical excellence, economic feasibility, ethical maturity and cultural sensitivity.”*
- Undergrad: 18 hour minor or 12 hour Area of Special Interest (ASI)

Univ. of Dayton: ETHOS -- *Engineers in Technical, Humanitarian Opportunities of Service-learning*

- *“ETHOS is founded on the belief that engineers are more apt and capable to serve our world appropriately when they have experienced opportunities that increase their understanding of technology's global linkage with values, culture, society, politics, and economy.”*
- Provides internship opportunities, classroom projects, and research opportunities

Messiah College: Collaboratory for Experiential Learning

- *“Promote learning, research, and applications to empower the poor and disadvantaged, promote justice for the oppressed, reconcile adversaries, and care for the environment.”*
- Provides undergraduate project opportunities

Drexel University: BS in Appropriate Technology

- *“Drexel's appropriate technology major offers a unique opportunity to combine an engineering degree with practical experience in helping improve the living conditions of people in rural areas of Africa, Asia, and Latin American, as well as in poorer regions of the United States.”*
- Stand alone BSAT major that may be combined in dual degree with BSCE

Symposium on Science and Appropriate Technology for Developing Countries – May 17 & 18, 2004

- B.E. Vijayam, Osmania University, Hyderabad, India
- Frank Matthews, Colorado School of Mines
- Otto Helweg, North Dakota State University
- Daniel Schaffer, Third World Academy of Sciences
- Sekazi Mtingwa, North Carolina A&T State University
- Kenell Touryan, National Renewable Energy Laboratory
- Bernard Amadei, University of Colorado
- Margaret Pinnel, University of Dayton
- Wolé Soboyejo, Princeton University
- David T. Vader, Messiah College