

# ETHOS

## Engineers in Technical, Humanitarian Opportunities of Service-learning

**ETHOS Conference 2004**

**Northwest College**

**Saturday, January 31**

presented by:

**Bill Eger**

Graduate Director of ETHOS

Department of Mechanical/Aerospace Engineering

University of Dayton





# The ethos of *ETHOS*:

- ◆ 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.



# Objectives

- ◆ Increase awareness technology's global linkage with culture, society, politics, and economy
- ◆ Improve ability of our partner communities to meet their basic human needs
- ◆ Place engineers in social and technical service-learning projects worldwide
- ◆ Promote sustainable engineering and design practices

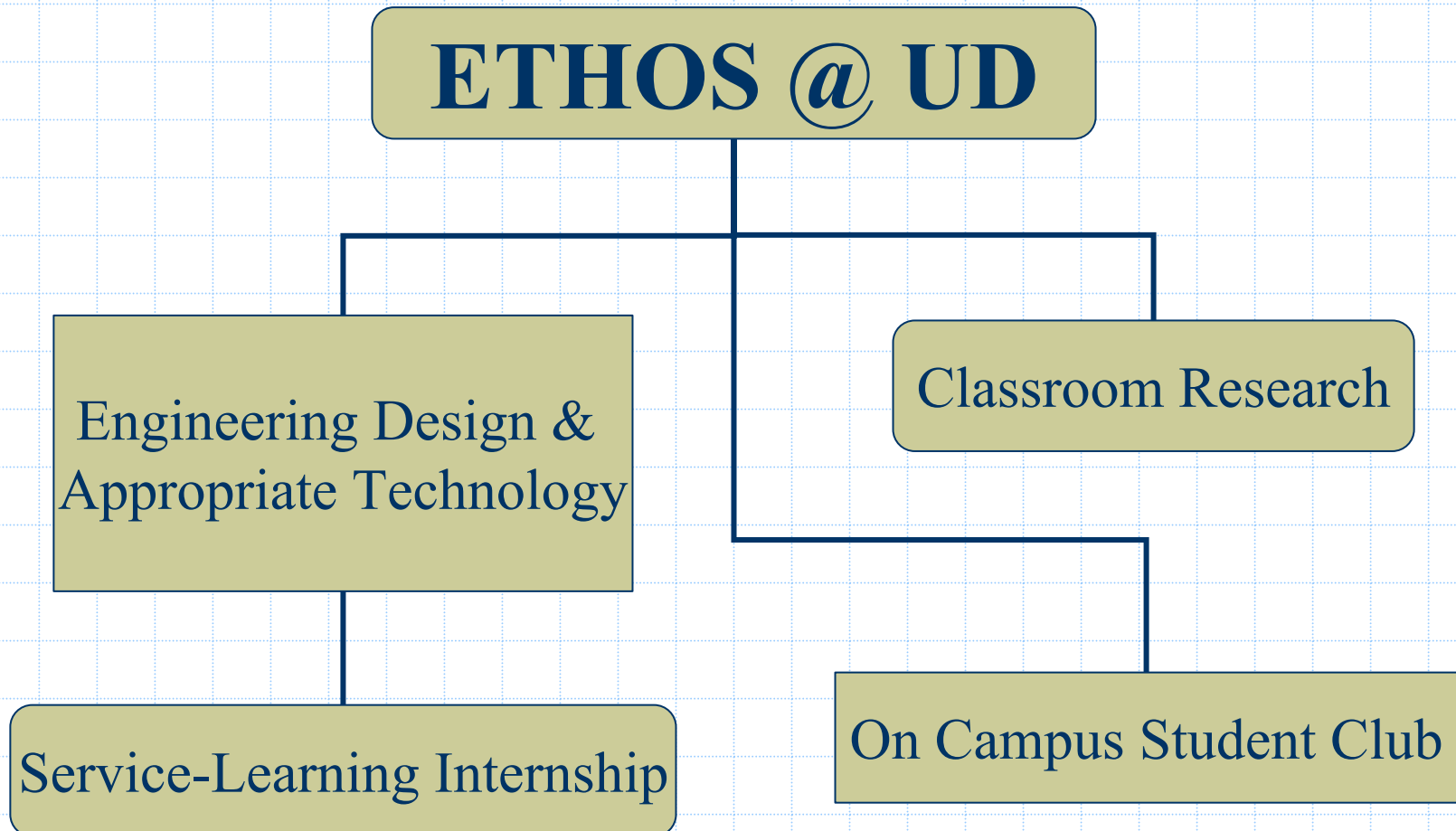


## ETHOS at the University of Dayton

- ◆ Service-learning internships
- ◆ “Engineering Design and Appropriate Technology” Technical Elective
- ◆ Materials Research through undergraduate class and lab
- ◆ Student service-learning club



# ETHOS at the University of Dayton





# Service-learning Internships

- ◆ Opportunity to serve and learn in an international, technical service placement
- ◆ Gain global and cultural perspectives on engineering, sustainability, and technology
- ◆ Gain language and technical skills
- ◆ Assist current organizations in development and dissemination of appropriate technologies
- ◆ Have fun, travel, meet new people



# Service-learning Internships

- ◆ Partnerships with community based non-governmental organizations
- ◆ Technical and social immersions
- ◆ Work with communities to implement appropriate solutions of technology for basic human needs



# Service-learning Internships 2003







# Service-learning Internships 2003





# Service-learning Internship Partners



**GRUPO FENIX**



**Proleña**

**Sobre la Roca**





# “Engineering Design and Appropriate Technology”

- ◆ Internship preparation course focusing on:
  - Appropriate Technology fundamentals
  - Recognizing and developing community driven needs
  - Theoretical approaches to implementation of appropriate technologies
  - Immersion in other cultures
  - Basic language preparation



# “Engineering Design and Appropriate Technology”

- ◆ Developed by the ETHOS program, Department of Mechanical and Aerospace Engineering, and School of Engineering
- ◆ Correlation of class curriculum between Department of Languages – School of Arts and Sciences, and University of Dayton Campus Ministry’s Center for Social Concern



# Materials Research

- ◆ Currently undergraduate materials class and lab provide testing of brick materials for efficiency stove development
- ◆ Looking to incorporate research into all forms of materials used in current implementations of appropriate technology



# Materials Research





# Materials Research





# Materials Research

- ◆ **Continually accepting** research projects from non-governmental and development organizations
- ◆ No cost to organizations
- ◆ Tensile, compression, impact, heating, cooling testing as well as others
- ◆ **Contact us for details**





# Student Service-learning Club

**NEW!!!**



# Student Service-learning Club

- ◆ Provide regional research of implementations of appropriate technology
- ◆ Student/community involved in learning about appropriate technology
- ◆ Research of appropriate technology solutions
- ◆ **Appropriate Technology Research Center and Lab**



# Student Service-learning Club

- ◆ Appropriate technology collaboration with other University student groups
- ◆ Collaboration of other universities and student organizations
- ◆ Student conferences



# ETHOS Website

- ◆ In February, ETHOS at the University of Dayton will be introducing its new website
- ◆ The website will provide a repository for information regarding the ongoing development of ETHOS related activities and work through discussion, sharing of ideas, experiences and resources.



# ETHOS Website

**<http://www.udayton.edu/~ethos>**

**Coming February 2004!!!**



# Contact Information

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