



GUIDING PRINCIPLES FOR SUSTAINABLE HUMANITARIAN ENGINEERING PROJECTS

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Overview of Presentation

- ▶ Intro to Humanitarian Engineering concept
- ▶ Goals of Humanitarian Engineering activities
- ▶ Efforts at University of Colorado (CU)
- ▶ Example of Curricular Integration at CU
- ▶ Proposed Guiding Principles
- ▶ Opportunity for Further Discussion

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Engineering for Development

- ▶ *Engineering for Development*
 - "...responds to the global need for engineers who:
 - ...understand problems of development & sustainability,
 - ...are motivated by a sense of the future, and
 - ...are able to interact with other disciplines,
 - ...to design and implement solutions."

– George Bugliarello, 2008

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Engineering for Humanitarian Dvlp

- ▶ Engineering for humanitarian development contributes to the implementation of the eight Millennium Development Goals



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Goals of Eng for Humanitarian Dvlp

Within the academic context, two basic goals:

- effective sustainable community development, and
- meaningful education of engineers.

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Engineers for the 21st Century

Engineers as...

- Social Entrepreneurs
- Community Builders
- Peace Makers, etc.
- Designers for the other 90%...

Facilitators of...

- Sustainable Development
- Social & Economic Change
- Capacity Building
- Appropriate Technology



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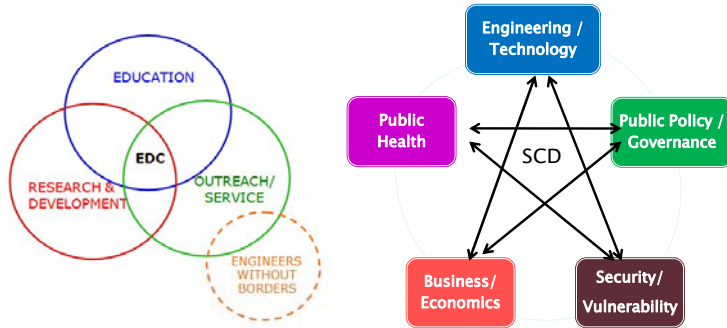
Mortenson Center Mission

MC-EDC promotes integrated and participatory solutions to humanitarian development **by educating globally responsible engineering students and professionals** to address the problems faced by developing communities worldwide.

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Mortenson Center in EDC



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Curricular Integration

- ▶ Sustainable Community Development I/II
- ▶ Practicum

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10 Proposed Guiding Principles

- ▶ *Quality Control and Ethics*
- ▶ *Shared Mission, Vision, Values, and Approach*
- ▶ *Organizational Accountability*
- ▶ *Education*
- ▶ *Innovation and Technologic Appropriateness*
- ▶ *Fundraising*
- ▶ *Collaboration and Teamwork*
- ▶ *Duration of Intervention*
- ▶ *Sustainability*
- ▶ *Evaluation*

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Principles 1-3

- ▶ *Quality Control and Ethics*
- ▶ *Shared Mission, Vision, Values, and Approach*
- ▶ *Organizational Accountability*

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Principles 4–6

- ▶ *Education*
- ▶ *Innovation and Technologic Appropriateness*
- ▶ *Fundraising*

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Principles 7–10

- ▶ *Collaboration and Teamwork*
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Further Discussion

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