

Engineering, Peace, Justice and the Earth:

An Academic Disciplines Network

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Our Purpose



- To reform engineering to meet the challenges of peace and security, poverty and underdevelopment and environmental degradation and sustainability

Questioning The Nature of Engineering



- What does engineering look like which contributes to peace, social justice and environmental sustainability?
- What drivers are there for current engineering practice?
- How can we learn from the historical examples of the relation between engineering, society, and the environment?
- What political, social and economic frameworks support an engineering practice that promotes peace, justice and sustainability?



Our Method

- To work collaboratively and develop course modules
- Current engineering practice and attitudes will be examined
- An algorithm will be developed for other faculty and institutions wishing to develop similar modules
- Workshops will be held regionally and nationally

Course Modules: Some Examples



- Obesity, Hunger, Energy, and Economics
- Design of Energy Systems in Rural Areas
- Developing a Social Justice Index
- The Gini Coefficient and Poverty in the U.S
- Numerical Methods in Bioengineering
- Low-Cost Building Materials in Africa

...A Closer Look: Developing a Social Justice Index



- For decades, scholars have warned of an impending global environmental crisis.
- Often we are told that efforts to ‘save’ the environment come at a significant cost economically which would damage our standard of living
- There is little in the way of quantifying the health of the planet. One approach has recently been developed in the European Union and it is termed the Environmental Quality Index. (QOL)

...A Closer Look: Developing a Social Justice Index



- We have as a profession towards the health of the Earth, even less attention has been paid to our professional responsibilities towards the poor.
- The notion has been seen to be outside our ethical responsibilities.
- Today however there is a growing belief that engineering does have such a responsibility.

...A Closer Look: Developing a Social Justice Index



- Your challenge will be to develop a theoretical model which may aid various progressive societies throughout the world in judging their commitment to the poor, typically that segment of society which has little power or even access to power. Your work will enable leaders to determine whether or not things are getting more just or less just.



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