

**A New Course for Spring 2016**  
**ME 125WY**  
**Appropriate Technology for the Developing World**  
**(TR 5:00 – 6:15 pm, Engr II 2243)**

**Course Description:**

This course focuses on the concept of Appropriate Technology (AT) and its implementation, particularly for the developing countries in the context of the latest technology development. Specific focus will be on the development of AT designs to meet the two critical needs of the developing world, energy and clean water. Existing approaches will be studied and analyzed. Based on the instructor's experience in an actual implementation of engineering projects in Rwanda from 2013 to 2015, some practical examples of AT are studied. A stand-alone solar-power battery system implemented in Rwanda will be used as a class project to illustrate the concept of AT design and the need for hands on experience (e.g. soldering, metal cutting and other basic construction skills) for AT project implementation in a developing community. Students will also learn to develop instructional materials for local residents in the developing communities to operate and maintain the project independently.



**Instructor:**

Walter W. Yuen ([yuen@engr.ucsb.edu](mailto:yuen@engr.ucsb.edu), 805-403-3637)



Professor Walter W. Yuen is a Professor of Mechanical Engineering at UCSB from 1977 to 2010. His research focus is in the area of thermal science. After a five year tenure (2010-2015) as Vice President at the Hong Kong Polytechnic University (PolyU), he is now back at UCSB as Professor Emeritus. From 2013 to 2015, Professor Yuen, together with his colleagues at PolyU, led groups of students to Rwanda implementing a number of AT projects. This course is based partially on his experience in Rwanda.

**Course Credit and Pre-requisite:**

This is a three credit course, open to both engineering and non-engineering students. Some basic understanding of Physics and Mathematics (Freshman or High School AP level) are preferred. Willingness to do hands-on work is required.

**Texts (recommended, not required):**

*Appropriate Technology, Tools, Choices and Implications.* Barrett Hazeltine and Christopher Bull, Academic Press, 1999.