

# ***Sustainable Community Development 1&2: CVEN 5834***

## **Course Syllabus**

University of Colorado

College of Engineering / Engineering for Developing Communities (EDC) track

Fall 2008 (SCD1) / Spring 2009 (SCD2)

**INSTRUCTORS:** David Silver, MD, MPH (Course coordinator SCD 1);  
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### **COURSE PARTICIPANTS**

This course is designed for graduate engineering, environmental, and health sciences students who plan to work in developing communities or who are interested in global health issues. It is offered as part of the [Engineering for Developing Communities](#) (EDC) program at CU Boulder. The program's mission is to educate a new generation of globally responsible engineering students and professionals who can offer sustainable and appropriate solutions to the endemic problems faced by developing communities worldwide.

### **COURSE DESCRIPTION**

SCD 1&2 is a 2 semester course sequence, but may be taken separately.

SCD 1 provides a background and framework for sustainable community development based on a participatory model. A public health perspective is emphasized, covering an overview of development and global health concepts and issues as they apply to developing communities. Through didactic, readings and class discussion, we will explore the health and inter-related challenges facing the world's poorest 4 billion people, along with potential solutions. Topics covered include: the principles and goals of global health, health inequalities, health determinants and risk factors, vulnerable groups, participatory community development, project design, culture and health, and behavior change communication. Conceptual learning will be complemented with the acquisition and practice of participatory community development skills and project planning through involvement in real-life group projects.

SCD 2 covers the principles, practices and strategies of appropriate technology as part of an integrated and systems approach to community-based development. Course content areas include technical issues in development, environmental health and communicable disease, appropriate and sustainable technologies with hands-on workshops, and global cooperation in development.

Self-selected groups of students will apply course topics to a real life appropriate technology project in a local “developing” community or actual international setting. Group projects designed in SCD 1 will be implemented during the second course sequence (SCD 2). Each group will present its project in class, guided by a set of criteria and the course material. Guest lecturers will provide additional insights from their particular area of expertise in both SCD 1 and 2.

There will be an opportunity to participate in a field-based, 3 credit-hour practicum over winter break (tentative sites include Ethiopia, Nepal, and local-based). Additionally, there is an option for a follow-up Maymester field-based independent study (also 3 credit hours). These courses are part of the practice-based requirement for the EDC MS degree program.

## **COURSE OBJECTIVES**

SCD 1&2 cut across many technical and non-technical disciplines. Together, their objectives are to:

- Provide students with a better understanding of and insight into the major challenges facing the world’s developing communities
- Help students develop the skills necessary to address those problems and provide holistic engineering and public health solutions that are sustainable and appropriate to the community being served
- Help students develop cultural and social awareness
- Prepare students to work as a member of an interdisciplinary team in creating sustainable projects in developing communities.
- Give students the opportunity to reflect on the importance of their community service
- Give students a professional work ethic
- Help students gain a better understanding of the key role of engineering and public health in sustainable community development

**CLASS HOURS:** Wednesdays, 3:00–5:30 pm in ECCR 1B55

**OFFICE HOURS:** Arranged per request

**TEXTS:** *Readings* will be available on-line from courses website.

**PREREQUISITE:** BS/BA degree. This course is open to graduate students in all disciplines, and seniors with permission of the instructors.

**CREDITS:** 3 credit hours (SCD1) and 3 credit hours (SCD2)

**COURSE WEBSITE:** <http://www.edc-cu.org/cven5834.htm>. This website will be frequently updated with assignments, lecture notes, readings for class, useful links, and resource materials. Make sure you visit the web site frequently.

## **COURSE GRADING**

In both SCD1 and SCD2, student grades will be based on class participation, reading, and critical thinking assignments, and successful community project design and implementation. More specifically, expectations of students include:

- **Reading:** There will be required readings, as well as recommended readings and websites for each topic. Students are expected to complete all required readings before each class and be prepared to actively participate in and sometimes facilitate class discussions.
- **Writing:** Four brief (2 pages, single-space, 1 inch margin, 12 font) critical thinking papers on sustainable community development issues over the course of the semester. The purpose of these reflection pieces is to help you organize your thoughts and clarify questions on key course themes. Rather than a review paper, it should summarize: (i) What struck you most about a particular reading or lecturer, what you agree and disagree with, and why (ii) How the readings or lecturers have impacted your thoughts on a particular area of interest in health, technology and sustainable development.
- **Attendance:** Attendance is critical to a sufficient understanding and working knowledge of course material. Students should discuss any absences in advance, whenever possible. Class attendance will be kept throughout the semester.
- **Class Participation:** Class participation is essential. Class participation is defined as intelligent, thoughtful articulation of ideas in discussion; respectful listening to other's point of view; asking relevant questions; neither being too dominant nor too passive in the discussions; and wholehearted participation in presentations and exercises. Students will be asked to moderate discussions on various topics.
- **Projects:** The class will divide itself into small groups, each responsible for applying the course material to potential projects in one of three developing community settings, international or local: Nepal, Ethiopia, and Longmont, CO . Each group will be mentored by one of the course instructors. Each group will make two class presentations reflecting the course material and based on research: one around mid-semester, and the final one at the end of the course. No travel is required for SCD 1 or 2, but as mentioned above, there will be an opportunity to participate in a field-based, 3 credit-hour practicum over winter break and a follow-up independent study over Maymester or summer break.

For each course in the sequence, grading will be based on the following factors:

- 15% Class attendance
- 20% Participation in class discussions, demonstrating understanding of required readings
- 45% Group project presentations (15% mid-term and 30% final)
- 20% Four short critical thinking papers on sustainable community development issues.

There will be no mid-term or final exam. A grading rubric will be handed out along with this syllabus. An information packet that includes curriculum, course schedule, reading assignments, written exercises, and instructions for the field project design will be handed out in the first class session as well as be posted on the website.

## REMARKS

*The CU-Boulder Honor Code defines academic dishonesty. Violations of this code will result in a lowering of your grade for this class. The CU-Boulder Honor Code is available on line, at <http://www.colorado.edu/academics/honorcode/>.*

*If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities.*

(303-492-8671, Willard 322, [www.Colorado.EDU/disabilityservices](http://www.Colorado.EDU/disabilityservices))

*Every effort shall be made to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance.*