**CE 4243: Water - Spring 2015**

**Water Technologies for Emerging Regions:**

**Bringing Health, Education, Development and Peace to Remote Villages**

**I. Instructor:** Dr. David Sabatini, 301B CEC, 325-4273; sabatini@ou.edu

**II. Textbooks:**


**III. Objectives:** To gain fundamental skills critical to successfully designing and implementing water technologies in developing countries, including:

- Determine quantity of water necessary for maintaining human health and learn how to identify / develop resources to meet this need in remote villages
- Gain an appreciation of waterborne pathogens and chemical toxicity and how these effect human health in remote villages
- Learn about appropriate technologies for water and waste water treatment and human hygiene in remote villages
- Gain an appreciation for the cultural, socio-political and economic/supply chain/business model aspects governing water and sanitation in remote villages
- Understand the importance of water and sanitation in remote villages to development and peace in emerging regions
- Develop a methodology, treatment scheme, and sustainability plan for remote villages of emerging regions
IV. Homework: Homework will be due at the beginning of class on the due date. Late homework will NOT be accepted! Homework will include student presentations in class.

V. RATs: RATs (readiness assessment tests) will be given. The RATs will cover a given reading assignment, and will consist of true/false and multiple choice questions. The RATs will be taken individually and in groups.

VI. Exams / Final: A midterm and a final exam will be given – the final exam will be comprehensive.

VII. Class Topics:
- The UN Millenium Goals (www.un.org/millenniumgoals/); situation / response
- Human Hygiene, Health and Water Quality: Pathogens and Water Quality
- Water Resource Identification / Characterization and Development
- Water Technologies for Human Health: Transport and Water Treatment
- Water Technologies for Human Health: Discharge and Waste Treatment
- Cultural, Economic and Social-Political Factors
- Arsenic / Fluoride Issues and Treatment
- Water, sanitation, development and peace
- Community Involvement / Case Studies
- Project Presentations

VIII. Class Attendance: Class attendance is mandatory. Every sixth absence will reduce your grade by one letter, irrespective of the reason for the absence. Thus, planned class absences should be held to a minimum so that you will have a reserve if you need them later in the semester.

IX. Grading: The course grade will be determined according to the scale listed below:

Homework 15 %
RATs 10 %
Project 15 %
Midterm Exam 25 %
Final Exam 25 %
Class Participation 10 %
Class participation will include attendance and peer evaluations.

W's, I's, and AU's

Withdrawal deadlines, and deadlines for switching from credit to audit, are listed in the Course Schedule. No exceptions to these dates will be granted. A grade of incomplete will be issued only if, due to extenuating circumstances, the student has a small amount of work remaining to be completed at the end of the semester. The student must be passing the course at the time the "I" grade is given. Work must then be completed within the specified time frame, but not to exceed one year.
X. Disabilities: Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact us personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

XI. Academic Honesty: Students are required to abide by the policies set forth in the Student Code; copies of the Code are available from the Office of the Vice-President for Student Affairs. As for this class, any student who cheats on an exam or quiz will receive an "F" for the course. All acts of academic misconduct will be reported to the Dean in accordance with the Faculty Handbook, Section 13.