Winter 2014       BEE 433/533 Irrigation System Design

Where:    #205 Women’s Building  
Lecture:     MWF 1100-1150 h  
Instructor:     Yutaka Hagimoto  
Office:  #208 Gilmore Hall (office hour TBA) / Tel: 737-6314  
E-Mail:  hagimoty@onid.orst.edu

Course Description
This course is designed to introduce engineering principles for field-scale irrigation systems. The course will cover economics of irrigation, soil hydrology, crop water requirements, properties of pumps and pipes, and various irrigation systems (e.g., sprinkler, micro, flood and rainfed).

Prerequisite:  none.
Recommended Backgrounds:  1 year Calculus and Physics (not necessary, but helpful)

Learning Sources:
- **Text:** Irrigation System Design by Richard Cuenca 1989. This text is out of print, but the chapters will be on the course blackboard. Other class materials (chapters and handouts) are on the course blackboard.
- **Other Required Learning Sources:** green engineering note for your homework and hand calculator

Student Learning Outcomes
Students who successfully complete this course have:
- Understood economics of irrigation management
- Learned hydrology of soil-plant system
- Learned characteristics of various irrigation systems
- Learned hydraulic properties of pumps and pipes

Course Contents and Attempted Schedule

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Evaluation of Student Performance:

- Grading for BEE 433/533: Homework (50%/40%), Class Participation (10%/10%), 2 Quizzes (20%/20%), and Term Projects (20%/30%).
- Homework: There will be weekly homework throughout the term. You can miss or drop one homework without penalty.
- Quizzes: There will be two open-book quizzes during the term.
- Term Projects: BEE 433/533 – Sprinkler System Design
  BEE 533 – Literature Review and Lecture
  Detail of these projects will be discussed in the class.

Final grade will be determined based on the total points and given as:

- A: above 90 pt
- B: 80 ~ 90 pt
- C: 70 ~ 80 pt
- D: below 60 pt (+ and/or – grades may be used)

Communication

Please post all course-related questions in the General Discussion Forum so that the whole class may benefit from our conversation. Please email your instructor for matters of a personal nature.

Notification of Disabilities

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

Statement of Expectations for Student Conduct

See http://oregonstate.edu/admin/stucon/index.htm for details. ANY act of dishonesty will result in consequences up to and including immediate failure of this course. Three examples of dishonesty include copying during an exam, writing a paper for another student, or copying someone else’s homework.