This course focuses on "indigenously developed" and what used to be called "traditional" farming methods and techniques. Such practices are those not dependent on either fossil fuels, chemical fertilizers, or other external inputs, and hence have been called "Low external-input technologies" (LEIT). Based on "indigenous technical knowledge" (ITK), they are typically small in scale, involving for the most part the labor of individuals, families, and communities. Emphasis is placed on those systems most commonly used in various parts of the world today and in times past.

Agriculture is treated here as the transformation of biophysical, sometimes referred to inappropriately as "natural," environments, into "cultural" environments. It is assessed in regard to both the plants cultivated (crops), and the soil, slope, moisture, and temperature conditions that exist and those that are either modified or created by farmers. The processes involved in the domestication of both crops and landscapes are discussed. Ecological and systematic approaches are taken in order to understand how different agricultural strategies insure continual long-term productivity and stability similar to that characteristic of environments that are not cultivated. Microeconomics is all-important.

The various "agro-ecosystems" are also discussed as economic activities that have highly visible spatial manifestations that result in distinctive "landscapes," and as activities that are dynamic, changing continuously. Development is treated conceptually as a specific type of change, not necessarily as a goal. It is envisaged as improvement in land productivity. It is the opposite of land degradation. Agricultural features such as terraces and canals are considered "landesque capital." Social, political, and cultural aspects of agriculture and development are not topics dealt with here.

This is not a "how to" course for tree-hugging, granola-eating acolytes of John Muir who wish to remold the world into some unrealistic utopia. This course is not about developing "sustainable agriculture," per se. It does, however, deal with issues of concern in the field of sustainability science. This course is intended for students who wish to gain a better understanding of the complexity of human-environment interactions, particularly as they pertain to people feeding themselves.

Enrollment Information

This course is offered in alternating years at the undergraduate level (339K in odd numbered years, e.g. 2009) and at the graduate level (390S in even numbered years, e.g., 2010).

Course number: GRG 339K and GRG 390S

Unique number: 37545
Meeting time: MWF 11:00-noon

Meeting room: GRG 102 (339K) and GRG 312 (390S)

Instructor Information

Instructor: William E. Doolittle

Office: GRG 306

Hours: by appointment via email

Phone: 232-1581

email: dolitl@austin.utexas.edu

Textbooks

There is NO textbook for this course. Instead, 1-2 readings for undergraduate students and 3-4 readings for graduate students will be available on Blackboard for each class meeting.

Copies of all PowerPoint illustrations (slides) used in class will also be available on Blackboard. Students are strongly encouraged to print-out these illustrations ahead of time and use them in class to assist in taking notes.


Basis of Grading

Undergraduate Students (339K)

- Three 33-question multiple choice examinations of equal value.
- Class participation, based largely but not exclusively on attendance. The course grade based on the average score of the three exams will be dropped one letter for four unexcused absences, two letters for seven unexcused absences, three letters for ten unexcused absences, four letters for 13 unexcused absences.

Graduate Students (390S)

- Three take-home essay examinations. Each exam is worth 25 % of the course grade (75 % total)
- One class lecture worth 25%
- Class participation. Same as for undergraduate students (see above).
http://uts.cc.utexas.edu/~wd/courses/339k/general/descrip.html

Created by William E. Doolittle. Last revised 16 December 2009, wed