Aims and topics. The objective of this course is to introduce students to development in India, and critically examine the current discourses on the domestic sociological, economic and ecological environmental effects of the current model of development. It will also put India’s development into a global context. The course aims at broadening perspectives vis a vis development in a global context and in India in particular, and encouraging critical and constructive questioning of current development pieties. The course consists of classroom lectures, student participation in field visit, classroom discussions, and discussions on video documentary films that highlight particular themes covered in the course. The course includes an innovative introduction to development studies through the medium of theatre, with student participation in a futuristic English play titled “Footprints”. The students will be graded based upon the 2 papers which again is based on their content, the quality of analysis, study of references, and clarity of expression.

The classroom component of the course comprises the following topics: (Part 1) Science & technology, Development, Environment, Food, water & corporate farming, (Part 2) Energy and society & economics, Governance, and India in a Global Context. There will be a number of field visits concerning real-time situations connected with an on-going issue drawn from one of the topics above.

Course requirements. Students are expected to attend all classroom lectures, panel discussions, field visits and view all documentary films. The quality of their active participation in all course activities will be part of the basis for grade assessment.

Two papers are required, each of about 2,500 words of text with documentation of bibliography and/or references, on subjects that relate to science, technology and sustainable development, including an Indian context. The subject matter of the first paper should be based on lecture topics of Part 1 of the Course, and the second paper should be based on lecture topics of Part 2 of the Course. Students may write the two papers on subjects of their choice and, if they consult the instructor in this connection. Soft copies of the finished first and second papers should be emailed to
<sg9kere@live.com> and hard copies submitted to the office, on or before 11 October 2013 and 25 October 2013 respectively, for evaluation.

**Assessment and grading.** Students will be assessed on their participation in all the stages. The final grade will be based upon evaluation of the two papers based on their content, the quality of analysis, study of references, and clarity of expression (70 percent); attendance, classroom participation and quality of field visit presentation (30 percent)

**Office hours.** Professor Vombatkere will be available to meet students by appointment either before or after regular class meetings. He can be contacted by email as given above.

**COURSE CONTENT**

- **LECTURE 1** – Introduction to the content and conduct of the course.
- **LECTURE 2** - Ethics in S & T in the context of finite resources.
- **LECTURE 3** - The Third World – people & progress, education & health, beneficiaries & victims of development (urban & rural).
- **LECTURE 4** - Economic parameters – measuring progress in a globalizing world.
- **LECTURE 5** - Poverty & economic growth.
- **LECTURE 6** – Pollution: causes, effects, solutions.
- **LECTURE 7** - Surface and ground water: rivers and engineering.
- **LECTURE 8** - Formal & informal knowledge systems, plant biodiversity, transgenic modification.
- **LECTURE 9** - WTO, corporate farming & food technology.
- **LECTURE 10** - Agriculture in a post-hydrocarbon world: sustainable and organic agriculture.
- **LECTURE 11** - Energy and the growth of societies.
- **LECTURE 12** - Alternative energy sources.
- **LECTURE 13** - Nuclear energy: policy, costs, benefits, risks, transparency, and accountability.
LECTURE 14 – Re-thinking sustainable development.

LECTURE 15 – Transportation: the lifeline of the economy in the context of fuel availability & alternative fuels.


LECTURE 17 - Concept of the corporation: corporate responsibility & the meaning of efficiency.

LECTURE 18 - Protest, militancy & terrorism: causes and solutions, role of the police and military in a democracy.

LECTURE 19 - The military-industrial complex: corporatizing conflict.

LECTURE 20 – Growing India-USA strategic ties: regional effects & repercussions.

Field visits. Note: Here are two examples of proposed field visits; because of transport and other uncertainties, the actual sites of visits will be known only shortly before departure.

Example 1. The tomato (or badanekai (aubergine) or kumblakai (pumpkin) or balehannu (banana)) trail.

One or two vegetables or fruits will be tracked from the farmers' field to wholesale market to bulk retail market to retailers (including mobile vendors) to two or three typical consumers.

Focus: The issues focussed upon would be farmers input costs (for seeds, water, fertilizer, pesticide, labour), transportation (cost and convenience) to wholesale or bulk retail markets, sale price determination (auction, etc), item demand dependence, loans; bulk breaking and sorting by quality at wholesale or bulk retail markets, sale price determination; lifting stocks (after quality sorting) by small shopkeepers & mobile vendors; prices paid by homemakers & small and medium restaurants.

Topics: Agriculture policy, chemical farming, market-dependence of farmers, corporate farming, seed choice and availability, water availability, land acquisition.

Example 2. Water management issues.
Water management in general will be examined in the rural (agricultural) context and the urban (domestic & industrial) context with regard to sustainability, with reference to national and state water policy.

**Focus**: Watershed management, rainwater harvesting initiatives & groundwater conservation initiatives in urban and industrial areas. Water use (and misuse) in urban and industrial areas. The concept of “24x7” urban water supply. Water demand forecast.

**Topics**: Traditional methods; industrial methods; effects on water availability; domestic, agricultural and industrial water demand; social effects of large dam-canal systems; the Indian interlinking of rivers project; water pollution and environment law.

**Documentary films.** The following films will be screened in and outside class.

2. “Why are Warangal farmers angry with Bt cotton?” – Documentary film regarding the effects of growing Bt cotton in Warangal District of Andhra Pradesh. (Duration: 25m).
5. “The Corporation” – Documentary film regarding the functioning of commercial corporations. (Duration: 2h 50m in 3 parts).
6. “Nero’s Guests” - Documentary film regarding the agricultural crisis in India. (Duration: 60 minutes).

**Panel discussions**

Students participate in interactive sessions with experienced panelists. The topics for panel discussions are chosen depending upon students' interest and response to lectures. Examples of panel discussion topics:

* Can industrialized societies survive at present levels of consumption?
* Are there limits to urbanization? Is urban collapse a possibility?
* A post-hydrocarbon world – myth or reality?
* Is it possible to counter terrorism only by force?
* What should be the central issues in a national energy policy?
* Is it possible to de-link global warming from energy use?
* Can nuclear power generation replace other generation methods?
* How best should India organize for its food security?

**Course pack (selected journal articles) required readings:**


*Wallerstein, I. “Globalization or the Age of Transition ? A long-term View of the Trajectory of the World System”http://fbc.binghamton.edu/iwtrajws.htm

*Selections from “AT Reader” (What are appropriate technologies, a few definitions of technology, Gandhi and Swadeshi, Self reliance).


*Devinder Sharma. “Produce and Perish: The Fallacy of Raising Crop Yields.” Available at www.crosscurrents.org/glo-crop.htm

Ricardo Salvador and G.A. Zdorkowski. “Cheap Food that Isn’t” available at www.public.iastat.edu/-rjsalvad/cheapfood.htm


Roy Arundhati, Gail Omvedt, Himanshu Thakkar (letters and replies and rejoinders on Narmada Project). Available at www.countercurrents.org/glotgan260304.htm

Huck Gutman. “Outsourcing in the Developing and Developed World.”

Recommended readings:


Recommended websites for Naramada Valley controversy:

http://www.narmada.org/gcg/gcg.html,

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ADDITIONAL COLLEGIATE COURSE POLICIES AND PROCEDURES.

Administrative Home
The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Student Academic Handbook.

Electronic Communication
University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences. (Operations Manual, III.15.2. Scroll down to k.11.)

Accommodations for Disabilities
A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See www.uiowa.edu/~sds/ for more information.

Academic Fraud
Plagiarism and any other activities when students present work that is not their own are academic fraud. Academic fraud is a serious matter and is reported to the departmental DEO and to the Associate Dean for Undergraduate Programs and Curriculum. Instructors and DEOs decide on appropriate consequences at the departmental level while the Associate Dean enforces additional consequences at the collegiate level. See the CLAS Academic Fraud section of the Student Academic Handbook.

Making a Suggestion or a Complaint
Students with a suggestion or complaint should first visit the instructor, then the course supervisor, and then the departmental DEO. Complaints must be made within six months of the incident. See the CLAS Student Academic Handbook.

Understanding Sexual Harassment
Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Comprehensive Guide on Sexual Harassment for assistance, definitions, and the full University policy.