



**“Technology, Globalization,
and Culture”
Building Curricular Bridges**

**Prof. James Bernard (Mechanical
Engineering)**

**Prof. Mark Rectanus (World
Languages and Cultures)**



Meeting the Global Challenge

How can we prepare our students for living and working in global contexts?

Who will our students be working with?

Where will they be working?

How will they be working?

Meeting the Global Challenge

The World At Night

http://bertc.com/subfour/world_at_night2.htm





Technology, Globalization, and Culture

Course Background and Development

- Collaboration Between Colleges of Engineering and Liberal Arts and Sciences
- Administrative Support: ME and WLC
- Faculty Commitment: Bernard and Rectanus develop course: 2004
- Significant support from Engineering Distance Education
- Location: Alliant Energy-Lee Liu Auditorium in Howe Hall
- TA (Michelle Rusch, Ph.D. candidate) volunteered to assist in course delivery (WebCT/Blackboard) → Today 3 TAs (supported by CoE, LAS, Graduate College)
- Course support for speakers provided by Cargill and Deere



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Selected Course Speakers 2006

Guests

Robert Reich, Professor of Public Policy at the Goldman School of Public Policy at the University of California at Berkeley *The Truth about Globalization*

James D. Waters, Jr. Vice President, Caterpillar, Inc.
Thriving in a Global Environment

Robert Chiusano, Executive Vice President and Chief Operating Officer, Rockwell Collins Commercial Systems, *Evolution of Engineering: The Impact of Leadership*

Flynt Leverett, Middle East Expert, a former National Security Council adviser on the Middle East,
The Middle East, Global Energy, Terrorism and Oil Markets

Adel A. Zakaria, Senior Vice President, Worldwide Engineering and Manufacturing, Global Agricultural Tractor and Implement Sourcing, Deere & Company
Pursuing Growth at John Deere Agricultural Division



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Selected Course Speakers 2006

Guests

Pietra Rivoli, McDonough School of Business, Georgetown University
Travels of a T-Shirt in the Global Economy

Joseph Nye, Harvard University Distinguished Professor
American Power and the Struggle Against Transnational Terrorism

Richard Frasca, Corporate Vice President, Cargill; *The Globalizing Economy*

Ray Kurzweil, author of several books on health, artificial intelligence, transhumanism, and the technological singularity

Newt Gingrich, Chairman of the Gingrich Group, former Speaker of the House

American strategies for success in competing with China and India in a globalized world market



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Course Texts

Thomas Friedman: *The World Is Flat. A Brief History of the Twenty-First Century.*

Naomi Klein: *No Logo.*

Robert Reich: *The Work of Nations.*

Pietra Rivoli: *The Travels of a T-Shirt in the Global Economy.*

Additional text for graduate students:

Frank Lechner and John Boli. *The Globalization Reader.*



Technology, Globalization, and Culture

Learning Goals

- Demonstrate an understanding of key issues and debates concerning globalization as they shape and are shaped by institutions and professions.
- Develop a critical perspective of how globalization is approached by experts inside and outside of their profession.
- Demonstrate their ability to identify, develop, and present a global project by working cooperatively in project teams.
- Enhance their leadership skills by working collaboratively with students from diverse backgrounds and professions.



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Course Synergies

- Create a forum for discussion of global issues
- Leadership opportunities and professional contacts → *It pays to attend class!*
- Students work with professionals (off-campus distance education) in teams
- Students in *Languages and Cultures for Professions* program use as capstone course
- Engineering students use as technical elective



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Student Profile, Communication, Team Dynamics

94 students (40 graduate students): 2005

140 students (45 graduate students): 2006

- 5 Students per team; Grad Students are Team Leaders
- Mix: gender, undergraduate/graduate, on-campus/off-campus, interdisciplinary (80% from Engineering)
- Attracts diverse student audience; students interested in sustainability
- Communication via *Skype*
- Training for Work in Global Project Teams
- Distance learning
 - 25-30 students registered in distance learning
 - Real time and asynchronous interaction
 - Streaming video
 - Lectures available on public website using *Real Player* or via *iTunes*
 - Live Chat during lectures



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Project teams

- Globalization projects
 - Proposals / Abstract
 - Annotated Bibliography
 - Final Project
 - Topics wide ranging: Biodiesel, Language Policy, Sourcing, Sustainability Issues

Student Interaction

- Threaded discussions (weekly topic)
 - Book Critiques (2 undergraduate / 3 graduate)
 - Minimize distinctions between on- and off-campus students
 - Significant participation by international students



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Challenges

- Maximize student and speaker interaction
- Course Delivery: Tech Support / WebCT / Remote
- TA funding
- Speakers logistics and funding
- Commitment for faculty course release and development



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Contributions to Global Learning

- Provides multidisciplinary learning opportunities for students
- Learning in multiple contexts through collaborative teams
- Establishes program visibility and presence both on- and off-campus
- Creates opportunities for cooperation with off-campus constituences (land-grant mission)
- Opportunities for faculty collaboration
- Opportunities for new partnerships with industry and NGOs (internships, experiential learning)



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Building Similar Models

- Identify faculty/students with key interests
- Gain administrative support
- Maximize on-campus expertise for guest speakers (including collaboration with speaker series)
- Invite industry contacts and alumni to participate
- Course as platform and link to other programs and disciplines (course elective; cross-listed course; dual-listed)
- Explore opportunities to globalize the course through distance education
- Promote the course (engage student organizations)



Thank you.

Visit our website at:

<http://www3.me.iastate.edu/me484/>