



UNDER CONSTRUCTION  
JANUARY 15, 2008 VERSION

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<http://www.business.uiuc.edu/stip/cas587.html>

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### Course background

If, as some predict, the 21st century is to be the Pacific Century, certainly science and technology will play a key role in Asia's rise. Countries throughout the region are quickly becoming global players in a broad range of scientific fields. At the same time, developments in science and technology pose new challenges to regional governments, business, and society. Some in the United States in turn are worried or even alarmed, concerned that the U.S. is losing its preeminent position in global science and technology. Others believe that Asia's emergence as a scientific and technological force will open new markets and create new opportunities for collaboration.

The scale of these changes is indisputable. Asia's science and engineering workforce is approaching 200 million and continues to grow. China's spending on research and development is growing at 17% annually. Scientists in Asia publish and patent in the U.S. at an increasing rate; high-technology exports from Asia are surging and U.S. firms increasingly base research activities in Asia. Recognizing that no single discipline can provide an adequate understanding of these changes, CAS 587 takes a multi-disciplinary approach to studying three over-arching questions:

- What are the key developments in science and technology in the Asia/Pacific?
- What is driving these developments and what is their impact on the region?
- What is the impact of these developments on the U.S. position in the global technological arena and what are appropriate U.S. responses?

Importantly, we will not attempt to be comprehensive nor could we be in a semester. However, we will gain both deeper and broader understanding over the semester.

The class is part of the initiative of the same name sponsored by the Center for Advanced Study and the Center for East Asian and Pacific Studies. Information on the broader initiative is at [www.business.uiuc.edu/stip](http://www.business.uiuc.edu/stip).

### Structure of the class

Class will be run as a graduate seminar, attended by both faculty and students. With the exception of the first and final classes, we will have a guest speaker for every session. As you will see, our guests will come from throughout the Asia-Pacific, as well as North America. Visitors include those who study the phenomenon academically, as well as those who are active participants in it. As a result, the nature of their presentations will vary. However, discussion will always be at the heart of class.

Our speakers have supplied one or more papers for us to review in advance. In some cases these are the papers they will be presenting; in other cases, they are background material. To contribute to the class, it is vital that you have read the advance material before class.

### Assignments and grading

Grades will be based on contribution to discussion (55%) and a written project (45%). Reflecting the range of backgrounds students bring, the nature of the written work is flexible. There is a default written project, which you may choose. You may also propose to me, by the third class period, another written project that you would find of more value. Examples might include an early draft of a paper for potential publication, an empirical research project, or a dissertation chapter. The goal is maximize the value of the assignment for your specific situation. It is acceptable for the project to also satisfy other requirements outside of the class.

The *default written project* is to complete three reaction papers for your choice of three guest speakers' sessions. Depending on the nature of the presentation and your field, the exact nature of the paper may vary, but in general the paper should address in 2 to 4 pages one or more of the following:

- What does the presentation contribute to our understanding of science, technology, and/or innovation as social phenomenon?
- How does the presentation serve as a specific instance of a more general phenomenon? For example, one might discuss science policy making in South Korea in terms of elite versus participatory policy-making.
- How does the presentation relate to your current or future professional activities? For example, a law student might discuss the relationship between the historical roots of China's environmental policy (Peter Purdue's talk) and how one might pursue issues of environmental law in China.

In any case, it would be appropriate to relate the presentation to other phenomena and/or theories, to discuss questions that the presentation raised, and to take issue with assertions made by the speaker.

The reaction paper must be submitted by the beginning of the next class meeting.

*There is no final exam.*

### **Classroom policies**

*Attendance:* Our mutual learning requires that we are each present for as many sessions as possible. However, flexibility is sometimes required. Therefore, you may miss one session without penalty. Each additional unexcused absence will lead to a loss of points from the discussion portion of your grade.

*Technology:* Please note that internet access in IGB 607, the room in which most of our sessions will occur, is spotty at best. Having become convinced that discussion suffers when students (and faculty) are "physically present in the room, mentally present on the Web", I consider this a good thing. If you must use a notebook during class, and I really wish you wouldn't, be courteous and stay off the Web. Also, please turn off cell phones.

*Time:* I will start at 1:00 and end at 2:50. Please avoid arriving late or leaving early. If it is absolutely unavoidable, advanced notice is much appreciated.

*Food and drink:* In Wohlers 120, you are welcome to have food and drink. In IGB 607, you may not, unfortunately.

### Meeting with speakers

One of the great opportunities of a seminar series like this is meeting individually or in a small group with visiting speakers of particular interest to you. Within the constraints of the speaker's schedule, I am happy to arrange these meetings. Please let me know *early in the semester* if there are any speakers with whom you would particularly like to meet. Don't be shy, but please remember that I can't promise to find a time.

### Special events

There are two special events occurring this semester as part of the broader STIP initiative.

*The changing role of intellectual property rights in Asia (March 7 & 8):* This should be a fantastic conference and you are enthusiastically invited to attend, if your schedule allows, one or both days of the conference. More information, including registration (free), will be posted on the STIP website shortly.

*Presentation by AnnaLee Saxenian. (4:00, Wednesday, March 12, Knight Auditorium, Spurlock Museum.)* Professor Saxenian's public lecture will *take the place of* our March 13 class. Please consider this a regular class session and attend if your schedule allows.

**Schedule and readings**

*Please note that, with the exception of Sessions 1 and 14, lectures will occur in Room 607 of the Institute for Genomic Biology Gatehouse (basement of smaller building just east of the Morrow Plots) unless otherwise noted.*

*Readings are available at <http://www.business.uiuc.edu/stip/cas587.html>*

**17-Jan            Session 1**

*Speaker*            None

*Topic*                Overview and Administration

*Readings*           Please read the Beech article and ANYTWO other articles

Beech, H. (2006) "Asia's Great Science Experiment: A potent brew of talent, ambition and serious money are making the region a leader in innovation." *Time Asia*. October 30, 2006.

Walsh, B. (2006) "Singapore: Asia's Stem Cell City" *Time Asia*. October 30, 2006.

Lemonick, M. (2006) "Are We Losing Our Edge?" *Time*. Feb. 05, 2006.

University of Illinois (2006) [Excerpts of] *Strategic Plan*.

Mooney, P. and S. Neelakantan (2006) "Foreign Academics Question the Quality of Their Countries' Engineering Programs." *Chronicle of Higher Education*. September 8, 2006.

Harden, B. (2007) "Japan's Warp-Speed Ride to Internet Future" *Washington Post*. August 29, 2007.

Konrad, R. (2007) "Immigrants behind 25 percent of tech startups: Companies employed 450,000 workers, generated \$52B in sales in 2005" MSNBC.COM. Jan 3, 2007.

<http://www.msnbc.msn.com/id/16459952/print/1/displaymode/1098/>

<b>24-Jan</b>	<b>Session 2</b>
<i>Speaker</i>	Langdon Winner (Thomas Phelan Professor of Humanities and Social Sciences, Department of Science and Technology Studies, Rensselaer Polytechnic Institute)
<i>Topic</i>	Science and Technology Studies in China: The Question of "Innovation"
<i>Readings</i>	"China's Innovation System and the Move Toward Harmonious Growth and Endogenous Innovation," by Shulin Gu and Bengt Ake Lundvall. 2006. <i>INNOVATION: management, policy &amp; practice</i> . 8(1-2):1-26.
<b>31-Jan</b>	<b>Session 3</b>
<i>Speaker</i>	Preeta Banerjee (Assistant Professor of Strategy, Brandeis University)
<i>Topic</i>	Leveraging information technology competence in bioinformatics in India
<i>Readings</i>	Leveraging information technology competence in bioinformatics in India
<b>7-Feb</b>	<b>Session 4 NO CLASS</b>
<b>14-Feb</b>	<b>Session 5</b>
<i>Speaker</i>	Peter Purdue (Professor of Asian History, Yale University)
<i>Topic</i>	Environment and Empire in Chinese History
<i>Readings</i>	"Sustainable Development on China's Frontiers." In <i>Natures Past: The Environment and Human History</i> , edited by Paolo Squatriti. Ann Arbor: University of Michigan Press, 2007.
	"Erasing the Empire, Reracing the Nation: Racialism and Culturalism in Imperial China." In <i>Imperial Formations</i> , edited by Carole McGranahan, Peter C. Perdue and Ann Stoler, 141-169. Santa Fe: School of American Research, 2007.

<b>21-Feb</b>	<b>Session 6 NO CLASS</b>
<b>28-Feb</b>	<b>Session 7</b>
<i>Speaker</i>	Joan Fujiwara (Professor of Sociology, University of Wisconsin)
<i>Topic</i>	The rise of genomics in Japan
<i>Readings</i>	TBA
<b>6-Mar</b>	<b>Session 8</b>
<i>Speaker</i>	OokJoon Yoo (Professor, Dept. of Biological Sciences at KAIST; Director of BioMedical Research Center)
<i>Topic</i>	Starting a biomedical research institute in Korea
<i>Readings</i>	TBA
<b>12-Mar</b>	<b>Session 9 **Wed, 4-5:00, Knight Auditorium, Spurlock Museum**</b>
<i>Speaker</i>	AnnaLee Saxenian (Dean and Professor in the School of Information and professor in the Department of City and Regional Planning at the University of California, Berkeley)
<i>Topic</i>	The New Argonauts: Remaking Global Geographies
<i>Readings</i>	<p>“The New Argonauts” Words into Action IMF/World Bank publication, 2006</p> <p>“Brain Circulation: How High-Skill Immigration Makes Everyone Better Off” THE BROOKINGS REVIEW, Winter 2002 Vol.20 No.1, pp. 28-31</p> <p>“The Age of the Agile” in What’s Next? Strategic Views on Foreign Direct Investment, Invest in Sweden/UNCTAD/WAIPA, 2005</p>

**27-Mar Session 10 CANCELLED. NO CLASS.**

~~*Speaker* Sanghyun Kim (Research fellow at the Program on Science, Technology & Society, Kennedy School of Government, Harvard University)~~

~~*Topic* Rethinking the History of Korean Science & Technology Policy~~

~~*Readings* TBA~~

**3-Apr Session 11**

*Speaker* Ed Lincoln (Director, Center for Japan-U.S. Business and Economic Studies, New York University)

*Topic* Japan: S&T Strengths and Weaknesses in the 21st Century

*Readings* Science and Technology Agency, Japan's Science and Technology Initiatives.

[http://sciencelinks.jp/images/stooverview\\_en.pdf](http://sciencelinks.jp/images/stooverview_en.pdf)

"SUPER COMPETITION: Japan Launches Effort to Build World's Fastest Supercomputer" (November 22, 2005, Trends in Japan).

<http://web-japan.org/trends/science/sci051122.html>

Lee Branstetter and Yoshiaki Nakamura, "Has Japan's Innovative Capacity Declined?" Columbia Business School, Center on Japanese Economy and Business, Working Paper No. 209.

[http://digitalcommons.libraries.columbia.edu/cgi/viewcontent.cgi?article=1032&context=japan\\_wps](http://digitalcommons.libraries.columbia.edu/cgi/viewcontent.cgi?article=1032&context=japan_wps) [Feel free to skip the detailed regressions and focus on their conclusions]

**10-Apr Session 12**

*Speaker* Yongrak Choi (Chairman of Korea Research Council of Public Science & Technology (KORP))

*Topic* Perspectives on Technological Innovation: Korean Experience

<i>Readings</i>	Perspectives on Technological Innovation: Korean Experience (Presentation & paper) Growth Path of Samsung Semiconductor
<b>17-Apr</b>	<b>Session 13</b>
<i>Speaker</i>	An-Sik Chung (Professor, Dept. of Biological Sciences at KAIST)
<i>Topic</i>	Korean biochemistry
<i>Readings</i>	TBA
<b>24-Apr</b>	<b>Session 14</b>
<i>Speaker</i>	Glenn Hoetker
<i>Topic</i>	What have we learned?
<i>Readings</i>	TBA

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谢谢

Maraming Salamat

有難うございます

Terima kasih

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Thank you!