

**THE UNIVERSITY OF MASSACHUSETTS
CHINA STRATEGY**

**Office of Academic Affairs, Student Affairs and International Relations
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Background and Introduction

The road to the economic and social development of Massachusetts runs through the University of Massachusetts. In today's globally integrated and deeply inter-dependent world, for the University that means not just educating Massachusetts students, but helping the entire Commonwealth understand and respond to new global realities. The emerging role of China is among these important new realities.

New global realities require new, effective responses. With the emergence of the EU, NAFTA, and strong economic development in Asia, access to markets, alliances, and global influence are all being reshaped. As a research university, the University of Massachusetts must ensure that our students are prepared to meet the challenges of this new world; that our faculty has opportunity to engage in cutting-edge research across national boundaries; that we understand the implications of reconfigured global markets and economic systems; and that we account for the impact of global agreements shaped through GATT and the WTO.

We are all affected by permeable national boundaries and interdependent global systems. The increasingly complex nature of our world "community" requires better, more appropriate solutions that will often not be contained within national boundaries. The best scholars and the best universities institutionalize access and interaction across boundaries. While the UMass database reflects the scope of our engagement around the globe, the University of Massachusetts has identified a few key partners in South Africa, Liberia, Germany, Brazil, Australia, and China. Because of its size and rapidly growing political and economic presence world-wide, China is a particular focus of the University's international strategy.

Over the past 25 years, China's economy has experienced remarkable growth. Currently ranked # 4, behind only the U.S., Japan, and Germany, China is already one of the dominant economic powers in the world, bringing challenges and opportunities in equal measure. As a long-standing leader in global education, research and problem solving (Hokkaido University in Japan was founded in 1876 when the third President of UMass, William Clark, was commissioned by the Emperor of Japan to establish an institution in Japan like the one he led in Massachusetts), the University of Massachusetts is again taking the lead in preparing the Commonwealth for these new challenges. China, as has been indicated, is the centerpiece of that effort.

The UMass strategy in China is completely consistent with our mission as a land grant university. In addition to the traditional roles of the university in teaching, research, and service, the University of Massachusetts is committed to making direct, immediate contributions to the broader economic and social development of the Commonwealth.

Accordingly, the UMass China strategy is driven by several complementary goals:

- To prepare UMass students for life in an interdependent and highly complex world, and specifically to bring greater awareness and understanding of China to the University's students, faculty, staff and associates;
- To serve the broader Massachusetts community in facing the multiple challenges of globalization;
- To provide a reliable, culturally-sensitive, *knowledge base* for the Massachusetts business and public sectors regarding China and to build a China-based platform to advance those interests in China;
- To develop capacities and relationships that will allow our State's business interests to maximize their potential in the China market;

Beyond its traditional and well-known resources and expertise, including its enormous research capacity, the University of Massachusetts has two unique—and invaluable—assets for leading Massachusetts into China: (1) a formal partnership with Tsinghua University (the most important technical university in China) that is focused on providing economic benefits to the Commonwealth, and (2) the Confucius Institute connection, which brings Chinese government support to UMass for the teaching of Chinese language and culture, links UMass to a world-wide network of China specialists, and, perhaps even more importantly, gives UMass immediate, direct access into the highest reaches of the Chinese Government. Taken together, these two relationships provide UMass with an unmatched opportunity, and the Commonwealth of Massachusetts with a remarkable advantage, in China.

The UMass Strategy in China

Tsinghua University is often referred to as the “MIT of China.” The partnership with UMass has significant cultural and political meaning in China. Being publicly embraced by Tsinghua as an equal and a partner brings UMass instant identity in China as a world class university. Given that over 350 Tsinghua graduates are now serving at the highest levels of the central Chinese Government (constituting what some have called the “Tsinghua Dynasty”), the partnership with Tsinghua also indicates to Chinese observers that the University of Massachusetts has both the imprimatur of, and access to, the Chinese Government leadership.

For its part, Tsinghua is consciously and publicly affording the University of Massachusetts status, visibility, and special access. The Tsinghua leadership clearly values the UMass partnership, and the friendships with UMass leaders, very highly. Tsinghua has made a significant, public investment in the partnership and has a strong commitment to ensuring that it is seen as making major contributions to China's development. This dynamic is of great value to the University of Massachusetts—and to the Commonwealth of Massachusetts.

Tsinghua (whose main campus is in Beijing) maintains a “Tsinghua Science Park” (a technology park) at its campus in Langfang, Hebei, a Chinese Province of 76 million people. Tsinghua is also closely allied with the Provincial Government of Hebei through the “Hebei-Tsinghua Development Institute.”

In September, 2006, the University of Massachusetts signed a Letter of Intent with the Hebei-Tsinghua Development Institute which committed the parties, among other conditions:

“To facilitate technology transfer by helping each other establish incubators in each respective State, and, within the context of their policies and respective powers, to provide services and necessary support to facilitate entry and operation of companies in each other’s respective region.”

Within that Letter of Intent, the Hebei-Tsinghua Development Institute also agreed:

“To provide assistance to find cooperative partners in China for Massachusetts companies; to serve as a platform to facilitate technology transfers from the Massachusetts Technology Transfer Center [housed at UMass and another signatory of the Letter of Intent] to partners in China; and to provide services and assistance ... to situate in China to fulfill their respective business missions. Specific assistance includes, but is not limited to, facilitating and setting up technology and business incubators for companies from Massachusetts.”

This is a remarkable commitment. By this one agreement, Tsinghua University, “the MIT of China,” and the main development arm of a Chinese Province of 76 million people, have jointly pledged to help Massachusetts companies set up technology sales and other business initiatives in China.

Lest the import of this agreement not be fully understood in Massachusetts, in March of 2007, the Governor of Hebei Province, Gengman Guo, sent a personal letter to UMass President Jack Wilson, thanking President Wilson for promoting cooperation between the Commonwealth of Massachusetts and Hebei Province, and noting with pleasure (“I sincerely wish the success of this project”) the “progress of establishment of the UMass Technology Center at the Institute of Tsinghua University in Hebei.” For his part, Governor Guo pledged during 2007 to send his executive vice governor, Zhifang Fu, to lead a delegation of “CEOs of our top companies as well as a group of venture capitalists” to Massachusetts to further the emerging business ties.

One week after the letter from Governor Guo was sent, the Vice Chair of the University Council of Tsinghua and President of the Hebei-Tsinghua Institute, Zheng Yankang, wrote President Wilson in thanks for a recent visit to Tsinghua of UMass Senior Vice President Marcellette Williams and UMass’ new Nobel Laureate, Dr. Craig Mello. (During this spring 2007 visit, Dr. Mello was named Science Advisor to Tsinghua’s President. Dr. Mello is also Presidential Science Advisor to UMass President Jack Wilson. An extended Tsinghua faculty visit to the UMass Amherst campus, focused on nano-technology, is scheduled for the summer of 2007, and will initiate what is expected to be regular and growing faculty exchanges.)

After reciting examples of the rapidly intensifying level of interaction between the two universities, President Zheng got directly to his main point. “As for the Massachusetts Technology Transfer Base [in China], we suggest that in mid-July we establish the Tech Transfer Base. ... This Base can be developed into Massachusetts Tech Transfer Service Co. (China) which can provide services and consultation for US companies to China and Chinese companies to Massachusetts. I believe this will be a very meaningful endeavor.”

The Second Pillar of the Strategy

Under a formal agreement between the China National Office for Teaching Chinese as a Foreign Language (Hanban)—which will provide significant funding—and the University of

Massachusetts, the **University of Massachusetts Confucius Institute** has been established and located on the Boston Campus.

The UMass Confucius Institute will support Chinese language instruction, teacher training, Chinese curriculum development and Chinese cultural events for the broader public, providing a clearinghouse of Chinese language and cultural materials and a platform for research into Chinese language and culture.

In 2006, U.S. Senators Joseph Lieberman and Lamar Alexander introduced legislation calling for an investment of \$1.3 billion over five years to fund Chinese language instruction in schools with the aim of improving business and cultural relations with China. Provision of Chinese classes in K-12 schools is a growing priority in public education throughout the United States. Nationally, Massachusetts is second only to California in the number of high schools that offer Mandarin Chinese classes. The University of Massachusetts Confucius Institute at Boston speaks to all of these needs. It is one of very few Confucius Institutes in the U.S. and the first one established in New England.

In terms of the UMass Strategy in China, establishment of a Confucius Institute at UMass, which brings significant Chinese Government financial support and additional direct access (via its sponsoring agency, Hanban) to the Chinese Central Government, is a perfect complement to the Tsinghua University partnership. As has been seen, the Tsinghua connection provides immediate national, public stature and a link to its high ranking alumni. The Tsinghua/Hebei connection brings access to a science and technology park and a close alliance with the Governor of a large Chinese Province. Together, these two pillars of the UMass China Strategy (Tsinghua University and Confucius Institute) provide high public visibility; national, regional, and local political connections; unparalleled economic access to a major Chinese Province; and a unique, highly beneficial, educational resource for Massachusetts.

Implementing the Strategy

The University of Massachusetts U.S.-China Business Forum is focused on promoting Massachusetts life sciences business opportunities in China. Its first-ever conference, held on Sept. 18-19, 2006, at the University's Boston campus, drew an important Chinese delegation including pharmaceutical industry and regional government representatives from Hebei Province. The September Boston Conference was followed by a UMass-led return visit to China in October, 2006. (A second UMass U.S.-China Business Forum will convene in Beijing in October of 2007.)

Although industry groups such as the Massachusetts Medical Device Industry Council and the Biotech Council have also in recent months hosted delegations from China, and MassMedic sent a group of industry leaders and state officials to Beijing in spring 2006 for an industry trade show (Boston Business Journal, Sept. 8, 2006), the UMass approach is an attempt to generate economic ties on a far broader scale.

Massachusetts businesses face multiple challenges in entering and gaining a foot-hold in the Chinese market, including:

1. Lack of internal expertise with regard to Chinese business culture and practice;

2. Limited understanding of actual Chinese market needs, coupled with geographical and other structural constraints;
3. Lack of understanding of the Chinese legal framework and high entry barriers for foreign companies;
4. Lack of communication channels and accurate information with regard to market entrance and development;
5. Limited access to Chinese public resources, worsened by discrimination against foreign businesses by the Chinese public sector;
6. Lack of tools for risk assessment.
7. No core knowledge and networks to solve and enforce business or contractual disputes.

Currently, China's investment in research and development comprises less than one percent of its GDP. This forces China to import technologies from abroad if it wishes to maintain its economic growth. Given Massachusetts's leadership in technology, especially in the field of biotechnology and medical devices, Massachusetts is well situated to become a major supplier of Chinese needs for technology.

Shortly after the first US China Business Forum held at UMass Boston in September 2006 (noted just above), a Massachusetts delegation led by UMass President Jack Wilson visited Tsinghua University as well as Hebei Province (October 9 to 13, 2006) and conducted a series of discussions with Governor Guo of Hebei Province and President Zheng of Tsinghua Hebei Institute. University-facilitated technology transfer, both from on-campus research to off-campus development, as well as commercial agreements between nations, was a key topic.

In response to these discussions, and the exchange of letters and agreements noted earlier, the University of Massachusetts plans to move quickly to establish a **Massachusetts Technology Base (MTB)** at Tsinghua University Hebei campus which will serve in many ways to market the University of Massachusetts and the Commonwealth of Massachusetts in Hebei Province. MTB will develop in three phases. The first phase will be devoted to infrastructure building and developing effective working relationships with our Chinese partners. As a service to our Chinese partners, during this first phase we will introduce the concept of—and assist Tsinghua in developing procedures for—technology transfer (the process of moving research products from university or other non-profit institutions to commercial licensing), thus helping Tsinghua maximize its own intellectual property potential. The University of Massachusetts has exceptional experience in this area, expertise which can be of great benefit to our Chinese partners. In this first stage we will also create an MTB website in Chinese and English, which will include selected translations from the Massachusetts Technology Transfer Center (MTTC) "Massachusetts Technology Portal" website. Our immediate goals in this first phase are to create working relationships and multi-direction information flows between Hebei, Tsinghua, UMass and MTTC members. These processes will also increase the name recognition of the University of Massachusetts and the State of Massachusetts, positioning Massachusetts as *the* technology hub for Tsinghua and Hebei. This first phase is expected to take one year.

During the second phase, we expect to complete one or more actual agreements whereby University of Massachusetts research products are licensed by Chinese users through the MTB mechanism. Beyond the economic benefits to UMass (and, presumably, the Chinese themselves), the process of going through actual licensing of UMass research by Chinese interests will bring several benefits. Tsinghua observers and the Chinese licensees will gain

direct experience in the various steps in the technology transfer process—how to value intellectual property, what the necessary legal frameworks are, how financing and payments are handled. The Chinese participants will get a hands-on lesson in both the “why” and the “how” of technology transfer, helping Chinese society in general become more understanding of and responsive to international concerns about intellectual property valuation and protection. Finally, we will also demonstrate that Chinese users will in fact “buy” and pay for technology and related services from Massachusetts via the MTB mechanism.

Concurrently, MTB will develop a clearer understanding of Chinese business practices, particularly as practiced in Hebei, and will establish closer relations with Hebei officials, business leaders, and entrepreneurs. In the third and final phase, MTB will emerge as a platform or launch pad for Massachusetts business interests to enter the Chinese market—arranging meetings, providing business, legal, and cultural tutorials and services, finding Chinese partners, matching Massachusetts technologies and services to Chinese users, interceding with government or private actors, and in other ways providing unique access to a major Chinese province. Ultimately, the Massachusetts Technology Base (MTB) will provide a viable, locally-based and informed, platform for Massachusetts business entry and expansion in China. Phases two and three are expected to take 12-24 months.

The UMass Strategy in China, and particularly the MTB dimension, is likely to be of most importance to smaller to mid-size Massachusetts firms with ambitions to enter the Chinese market. (The largest Massachusetts firms, with current world market penetration and substantial existing operations in China, will simply have less need for the UMass intervention).

The Massachusetts Technology Base will be located in the science and technology park in Hebei discussed above. The initial focus will likely be on Massachusetts biotechnology and medical device companies that wish to establish a beach-head in China while maintaining their main headquarters and operations in Massachusetts. Medical devices and biotech are seen as key to future job development in Massachusetts. In addition, both life sciences and medical device companies feel that job outsourcing to China does not adversely affect new jobs in Massachusetts, a crucial consideration if the UMass strategy is to have its desired effect.

Membership in Tsinghua University’s technology park will offer distinct and exceptionally valuable benefits in reducing the numerous disputes individual foreign companies have encountered in China involving such matters as IP protection, product registration and contract enforcement. Chinese commercial law is still in the development stage. Successful enforcement of contracts and intellectual property protection is often under the jurisdiction of local governments, with mixed and uncertain results from the foreign business owner’s perspective. Companies operating under the MTB umbrella will be able to utilize their association with both the Hebei Province Government and Tsinghua Hebei Institute for leverage in the negotiation and enforcement of contracts with Chinese counterparts. Importantly, MTB may also serve as a negotiating resource for Massachusetts companies.

Finally, the University of Massachusetts is engaged in an additional important, complementary, and potentially very high impact activity in China. Since 1998, the University has been conducting mock trials and other judicial reform programs in China aimed at making the Chinese Judiciary more fair, more responsible, and more transparent. These programs, sponsored by the US Department of State, and conducted in partnership with the Massachusetts Judges Conference, the private association of this State’s Judges, have taken over two dozen sitting

Massachusetts jurists to China. Intellectual property rights protection, and the enforcement of contracts—two issues of enormous concern to Massachusetts businesses considering investing in China—are among the project’s principal areas of focus. Strengthening the Chinese Judiciary, and making it more transparent and more committed to intellectual property rights protection, will reinforce all other aspects of the University of Massachusetts Strategy in China.

Conclusion:

Its partnership with Tsinghua University, coupled with the establishment of the Confucius Institute, has dramatically increased both the University of Massachusetts’ reputation in China and its capacity to promote the broader interests of the Commonwealth there. These connections obviously bring valuable new benefits to the UMass campuses. However, the UMass Strategy in China has much broader goals. The U.S. China Business Forum and, more importantly, the planned Massachusetts Technology Base in Hebei Province will provide expertise, important political and economic alliances, and direct support services for Massachusetts business and governmental interests in China.

The mission of the University of Massachusetts remains, as it has always been, to educate the Commonwealth’s students and provide research and services of direct benefit to the broader citizenry. To fulfill those roles in the interdependent global economy of the 21st century, it is necessary to move beyond the State’s, and, indeed, the nation’s, borders. Through its initiatives, the University of Massachusetts has developed exceptional capabilities, at a unique moment, to take the lead in China. We are now prepared to do so.