Course Outline

ETM 510/610 ITT

International Technology Transfer and Technology-Based Competition in China

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1. Description of the Course

This course will provide students with principles and basic framework for technology management from policy level and from companies’ business management level, through empirical research on Chinese economy and lessons from technology resource-based competition in the Chinese market. Four topics will be interconnected throughout the course, namely, Technology Policy, Technology Management (especially, Intellectual Property based technology resource management, e.g., patenting and patented technology, technology under trade mark, technical knowhow transferred with package license, etc.), Foreign Direct Investment / Multinational Enterprises, and Local Technology Capabilities / Indigenous Innovation Capabilities. The course will also provide research findings on nature of technology management including IP-based technology resource management in strategic and practical business terms. The course will summarize special rules in terms of technology policy and technology management in macro and micro level, based on Chinese studies. Three perspectives from primarily from local policy makers, from local companies, and from MNEs and foreign capital firms in China’s market will be considered. Technology competition and collaboration patterns in emerging economies, typically in China, among MNEs, between different groups of overseas companies, and between foreign and domestic companies will be discussed.

Students will learn the technology management system under globalized structure, through the discussion of the Chinese case with competition among MNEs and overseas capital firms in the market, and local companies.

2. Assignment:

Students will form 3-4 person teams to conduct research on a topic related to this course and present their report in the class.

The project report will include the following parts:
The team members (name, background and experience of each team member, and individual responsibilities in the project)

Introduction Section of the report (Motives and background for the topic);

Design of the research framework

Data collection and analysis

Findings

Conclusions

References (websites, working papers, publications)

3. **Contents of the Course:**

The course is designed as follows. Detailed contents might be subject to change according to practical requirements and students’ requests.

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<th>Items</th>
<th>Distribution of Contents (Lecture/discussion hours)</th>
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<td>Lecturing</td>
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<td>II. International Technology Transfer: Learning from Historical Events</td>
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<td>III. Foreign Direct Investment-backed Technology Competition vs. Collaboration</td>
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<td>IV. International Technology Transfer – Theoretical Analysis and Management. Aspects</td>
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<td>V. International Licensing Management: Patent, Trademark, and technical knowhow.</td>
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<td>VI. International Technology Transfer – Vertical Dimension</td>
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<td>VII. Technology Transfer Business – Pricing &amp; Payment Methods for Technology Transfer</td>
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<td>VIII. Research Frontier on International Technology Transfer: International vs. Chinese Scholars</td>
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Notes:

(1) Question analysis: Questions based on the lectures will be collected and analyzed, in order to
contrast with research findings by international scholars and Chinese researchers.

(2) Case studies: Typical cases will be used based on international technology transfer related to China.

(3) Class discussions: Typical topics or important issues will be used based on China’s economic development and technology transfer issues.

(4) Classroom exercise: Purchasing Power Parity based calculation of typical commodities and comparison between China and the US will be presented.

4. **Description of Detailed Contents of the 8 Modules of the Course.**

1st Module: Globalization in China: General Trends

- Globalization: Typical Economic Indicators related to Chinese Economic Development
- Nature of China’s Economic Development: Driving Forces and Dynamic Changes
- Processing Trade in Internationalization of Chinese Economy
- Special Discussion: Policy Transformation from Technology Import to Endogenous Innovation

2nd Module: International Technology Transfer into vs. from China: Learning from historical events

- International Technology Transfer with China: 5 Typical Time Zones
  - International Technology Import into China
  - International Technology Export from China
- Comparison of International Technology Transfer in two time Periods:
  - British Companies’ Transferring technology to China in 1980’s and 1990’s;
  - German Companies’ Transferring Technology To China in 2000’s
- Lessons learned for National Technology Policy
- Lessons learned for Firm Level Technology Capabilities

3rd Module: Foreign Direct Investment backed Technology Competition vs. Collaboration

- Foreign Direct Investment as a Unique Channel to Transfer Market based Technology into Host Countries: Theories and Empirical Research Findings;
- Fortune 500 in China: Technology based Competition vs. Capital based Competition
- Typical Sectors: IT and Pharmaceutical Sectors in China
- Patent Technology based Competition: Foreign Companies vs. Domestic Companies.

4th Module: International Technology Transfer – Theoretical Analysis and Practical Management

- Technology and Knowledge Transfer – basic concept and theoretical framework.
- Other typical forms of International Technology Transfer for Developing Countries.

• Basic information on IP system
• Patent Licensing agreement and nature of technology transfer
• Trademark licensing agreement and nature of technology transfer
• Technology knowhow transfer
• Case study

6th Module: International Technology Transfer – Vertical Dimension
• University-Industry Relationships
• Internationalization of R&D and MNEs’ R&D Centers in China
• International Entrepreneurial Movement.

7th Module: Technology Transfer Business – Pricing & Payment Methods for Technology Transfer
• Cost structure of International Technology Transfer
• Principles of Technology Pricing and Negotiation
• Practical methods of alternative payment for technology transfer.
• Case studies

8th Module: Research Frontier on International Technology Transfer: International vs. Chinese Scholars
• Research topics in international literature
• Research topics in Chinese based academic and business journals.
• Students’ Presentation and Discussion on their team report.

References:
Reference materials will be provided before the course starts.