



Peking University
Summer School International
2017

Advanced Courses (Graduate Level)

For graduate students and 3rd and 4th year undergraduates

July 3-14, 2017



Now available on www.oir.pku.edu.cn/summerschool



About the University

Founded in 1898, Peking University was established as the Imperial University of Peking, and it adopted its current name in 1912. It is one of the most prestigious and selective universities in China. The campus, known as “Yan Yuan” (the garden of Yan), is situated in the Haidian District in the northwest of Beijing. It stands near the Yuanmingyuan Garden and the Summer Palace.

Peking University is proud of its outstanding faculty, brilliant students, and its open, accepting, and diverse atmosphere. The university is a center for researched-based teaching, and it strives to maximize the potential of its students’ future-readiness and adaptability. The University engages in a wide array of teaching and research, which includes basic and applied sciences, social sciences, the humanities, medical sciences, management, and education. With its aspiration of connecting traditional values with future-oriented scientific concepts in research and teaching, PKU is consistently ranked among the world’s best universities and its position is rising. In order to ensure its comprehensive and continuous growth, PKU has fostered extensive relations with more than 380 universities and research institutes all over the globe.

About Beijing

Peking University is located in Beijing, the capital of China. The city of Beijing is one of the world's major cosmopolitans, with a 3,000-year history and a population over 20 million. Covering an area of 16,808 square kilometers, it is the political, cultural, and economic center of the People's Republic of China. Beijing's long history can be seen in its abundance of historical and cultural heritage sites that symbolize the magnificent ancient civilization of the city. Places such as the Forbidden City, the Great Wall, the Peking Man Site at Zhoukoudian, the Temple of Heaven, and the Summer Palace are all on the UNESCO World Heritage list. Beijing, a dynamic city where tradition meets modernity, is home to the headquarters of most of China's largest state-owned companies, and is a major hub for the nation's culture, education, and scientific developments.

What You Can Study

The courses are categorized into five modules, plus a course on Chinese language. Students can choose up to two courses in one module or one course in two different modules.

International Relations

- China and Asia-Pacific Regional Development
- Chinese Politics and Public Policy
- China in International Organizations

Sociology, Law, and Political Studies

- Understanding Frontier and Nation in Chinese History: A Sociological Approach
- Social Change and Social Problems in Contemporary China
- Chinese Constitutional & Administrative Law

Urban and Environmental Studies

- Ecological Degradation and Restoration in China
- Urban Studies in Contemporary China
- Remediation of Contaminated Environment
- City Transformation and Social Wellbeing in China

Earth and Space Sciences

- Digital Image of Remote Sensing Processing
- IR and its Application in Geosciences
- Introduction to Cutting-edge Technologies in Spatial Computing
- UAV-based Remote Sensing Technologies and Applications
- Introduction to Space

Innovation and Entrepreneurship

- Entrepreneurial Finance
- Research, Innovation, and Entrepreneurship in China
- Venture Design

Chinese Language

Detailed information on the 2017 courses at:
<http://www.oir.pku.edu.cn/summerschool/>

How to Apply

Applicants who want to apply for graduate level courses should fulfill the following requirements:

Be between the ages of 18 and 40 (inclusive) and be in good health

Be either a 3rd or 4th-year undergraduate student, or a graduate student, or a young professional

Have proof of English proficiency (required of non-English native speaking students; TOEFL, GRE, or IELTS scores are preferred forms of proof)

Application Deadline: May 31, 2017

Applicants must use the Online Application System to submit their applications and any other required information:

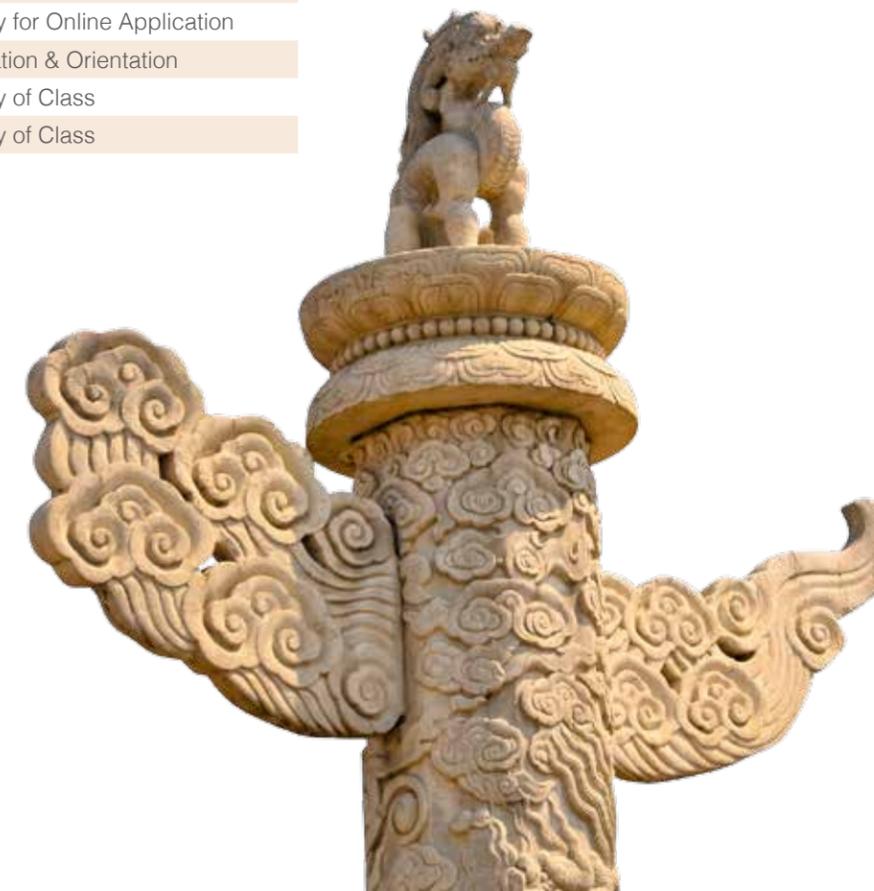
<http://www.oir.pku.edu.cn/summerschool>.

Steps for the Online Application:

- Go to the online application page (www.studyatpku.com)
- Make an account
- Log in and choose "Non-Degree Program Application"
- Select "Short-term Program" "Summer School International (Graduate Level)"
- Start the online application and fill in all the required information
- Submit the online application and pay the application fee

Important Deadlines

| | |
|---------------|---------------------------------|
| Jan. 1, 2017 | First Day of Online Application |
| May. 31, 2017 | Last Day for Online Application |
| Jul. 2, 2017 | Registration & Orientation |
| Jul. 3, 2017 | First Day of Class |
| Jul. 14, 2017 | Last Day of Class |



Fees & Payment

Application fee: RMB 400

Tuition fee: RMB 16000, which covers up to two module courses and the Chinese course (optional).

Note: The application fee is non-refundable.

Refund Policy:

Please inform the program officer immediately if there are any changes to your application. Changes include but are not limited to: switching to another course or withdrawing from the program. If you wish to withdraw from the program for personal reasons, the following refund policy will be applied:

| | |
|---------------------------------|-----------------------|
| On or Before Jun. 1, 2017 | 50% Refund of Tuition |
| Between Jun. 1 and Jul. 3, 2017 | 25% Refund of Tuition |
| On Jul. 3, 2017 or Later | No Refund |

Note: All refunds will be made in Chinese Yuan (RMB). Refunds will be returned to the original payment account.

Accommodation

Successful applicants can apply for accommodation in a student apartment (two or three single bedrooms with a shared living room and shared bathroom) in the PKU Global village for the duration of the program. Please be noted that only limited vacancies are available on a first come, first served basis.

The accommodation application process runs alongside the program application. The fee for a single bedroom is round 140RMB per person per day. Students should pay the accommodation fees at the reception of the Global Village upon arrival. For more information about Global Village, please check the website at <http://www.pkugv.com/index.asp>.

Those international students not living in a hotel must, according to Chinese law, register at the local police station within 24 hours.

Visa Application

Accepted students can apply for an appropriate visa via local Chinese embassy or consulate by providing the JW202 Form and Admission Notification, which will be offered by Peking University after admission.

Insurance

International students must have insurance, medical and accident insurance at least, when studying in China according to the policy of China's Ministry of Education. An insurance policy, purchased abroad and covers students' duration in China, must be provided upon registration. Otherwise it should be purchased upon registration.

Class Schedule

2-week courses (July 3-14)

| Courses | Credit | Instructor | MON | TUE | WED | THU | FRI |
|---|--------|----------------------------|-----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| China and Asia-Pacific Regional Development | 2 | CHEN Shaofeng | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |
| Chinese Politics and Public Policy | 2 | LEI Shaohua | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 |
| China in International Organizations | 2 | LIU Lianlian | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |
| Understanding Frontier and Nation in Chinese History: A Sociological Approach | 2 | TIAN Geng | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 |
| Social Change and Social Problems in Contemporary China | 2 | LIU Neng | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |
| Entrepreneurial Finance | 2 | GAO Yan | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 |
| Ecological Degradation and Restoration in China | 2 | LIU Hongyan | July 10 Class 2-4 Class 6-8 | July 4 Class 2-4 Class 6-8 | July 5 Class 2-4 Class 6-8 | July 6 Class 2-4 Class 6-8 | July 7 Class 2-4 Class 6-8 |
| Urban Studies in Contemporary China | 2 | ZHU Shengjun | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 |
| Remediation of Contaminated Environment | 2 | LU Xiaoxia | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |
| Research, Innovation and Entrepreneurship in China | 2 | LI Yongmei | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |
| City Transformation and Social Wellbeing in China | 2 | ZHAO Pengjun | | Class 2-4 Class 6-8 | Class 2-4 Class 6-8 | Class 2-4 Class 6-8 | |
| Chinese Constitutional & Administrative Law | 2 | YAN Tian | Class 10-12 | Class 10-12 | Class 10-12 | Class 10-12 | Class 10-12 |
| IR and its Application in Geosciences | 2 | LIU Xi | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |
| Introduction to Cutting-edge Technologies in Spatial Computing | 2 | LI Mei, HUANG Zhou | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 | Class 6-8 |
| UAV-based Remote Sensing Technologies and Applications | 2 | SUN Min, ZHANG Xianfeng | Class 3-4 Class 7-8 | Class 3-4 Class 7-8 | Class 3-4 Class 7-8 | Class 3-4 Class 7-8 | Class 3-4 Class 7-8 |
| Introduction to Space | 2 | ZONG Qiugang | Class 2-4 | Class 6-8 | Class 2-4 | Class 6-8 | Class 2-4 |
| Venture Design | 2 | CHEN Dongmin | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 | Class 2-4 |

Class Timetable

| | | | | | |
|---------|-------------|---------|-------------|----------|-------------|
| Class 1 | 08:00-08:50 | Class 5 | 13:00-13:50 | Class 9 | 17:10-18:00 |
| Class 2 | 09:00-09:50 | Class 6 | 14:00-14:50 | Class 10 | 18:40-19:30 |
| Class 3 | 10:10-11:00 | Class 7 | 15:10-16:00 | Class 11 | 19:40-20:30 |
| Class 4 | 11:10-12:00 | Class 8 | 16:10-17:00 | Class 12 | 20:40-21:30 |

PKU Summer School International 2017 (Graduate Level)

| | |
|---|-----------|
| International Relations | 08 |
| China and Asia-Pacific Regional Development | 08 |
| Chinese Politics and Public Policy | 08 |
| China in International Organizations | 09 |
| Sociology, Law and Political Studies | 10 |
| Understanding Frontier and Nation in Chinese History: A Sociological Approach | 10 |
| Social Change and Social Problems in Contemporary China | 10 |
| Chinese Constitutional & Administrative Law | 11 |
| Urban and Environmental Studies | 13 |
| Ecological Degradation and Restoration in China | 13 |
| Urban Studies in Contemporary China | 14 |
| Remediation of Contaminated Environment | 15 |
| City Transformation and Social Wellbeing in China | 16 |
| Earth and Space Sciences | 17 |
| IR and its Application in Geosciences | 17 |
| Introduction to Cutting-edge Technologies in Spatial Computing | 18 |
| UAV-based Remote Sensing Technologies and Applications | 18 |
| Introduction to Space | 20 |
| Innovation and Entrepreneurship | 20 |
| Entrepreneurial Finance | 20 |
| Research, Innovation and Entrepreneurship in China | 21 |

Peking University Summer School International

International Relations

China and Asia-Pacific Regional Development

Credit and hours: 2 PKU credits, 30 credit hours

Unlike other regions in the world, such as Europe and North America, there is no single predominant regional block in the Asia Pacific. Instead, the Asia-Pacific region has witnessed the resurgence of many regional integration schemes, such as FTAAP, RCEP, TPP, Belt and Road Initiative, etc. With different contents, these regional arrangements incorporate some overlapping but not entirely the same member states. What are the similarities and differences of these regional blocks and what are their rationales? Are they competing or are they complementary with each other? Why do big powers have different preferences? Why has China unveiled the Belt and Road Initiative and set up the AIIB? What is the impact of geostrategic tussles among big powers on regional integration in the Asia Pacific? Where will these regional blocks head for in the context of a rising sentiment of protectionism? These are the major issues that this course aims to examine. The course highlights the role of three big powers – China, the US and Japan in regional development. The first part of this course will examine the relationship between globalization and regionalization, and the challenges that globalization is facing. In the second part, we shall introduce different theories looking at regional integration. And the third part will go to great lengths to analyze different regional trading schemes.

Teacher: Dr. CHEN Shaofeng

CHEN Shaofeng is the associate professor in the School of International Studies, Peking University. He is also an advisor for PhD candidates. Before joining PKU, he worked as a research official and visiting research fellow at the East Asian Institute, National University of Singapore. Currently he serves as an editorial board member of Korean Journal of Policy Science and Asia-Pacific Security Dialogue, respectively. He was a visiting professor at Hong Kong University in 2014 and New York University in 2015. His research interests cover energy security, regional cooperation and regional integration in the Asia Pacific, and global economic governance. He has published for more than 30 papers and book chapters, and his works appear in both English and Chinese journals, such as the China Quarterly, Journal of Current Chinese Affairs, China: An International Journal, Copenhagen Journal of Asian Studies, Policy and Society, Journal of Chinese Political Science, International Politics Quarterly, International Journal of China Studies, American Study, and so on. He concurrently works as a Research Fellow of the Center for International Political Economy, PKU.

Chinese Politics and Public Policy

Credit and hours: 2 PKU credits, 30 credit hours

This course is an introduction to master level students to explore contemporary political system of China, with a special focus on its policy making process. The emphasis is on China's political structure, state and society relations. This course aims to provide students with a background on major political events in modern China, and then to investigate the current political issues in China today—environmental civil society activity, problems and benefits associated with continuing economic liberalization, and discourse from within the CCP on political reform.

Teacher: Dr. LEI Shaohua

LEI Shaohua received his doctorate degree in political science from the University of Utah in 2013. He is an assistant professor at the School of International Studies and a senior research fellow of the Institute of International and Strategic



Studies, Peking University. His research fields are Chinese Politics, Comparative Studies on Chinese and Foreign Political System, Sino-U.S. Relations, Counterterrorism. His major works include Social Protest in Contemporary China, 2003-2010; Transitional Pains and Regime Legitimacy (London: Routledge, 2014, co-authored with Yanqi Tong) and "The U.S. National Counterterrorism System: Its Evolution and Current Situation" (The Chinese Journal of American Studies, Jan 2015).

China in International Organizations

Credit and hours: 2 PKU credits, 30 credit hours

China, as the largest developing country and the second largest economy of the world, is playing an increasingly important and active role in major international organizations. People can hardly understand the logic of many international affairs without understanding the role of China in relevant international organizations in the first place. This course, which is intended for students from all social disciplines, seeks to provide an overview of the performance of China in major international organizations (e.g., UN, WTO, IMF, WB, BRICS and AIIB). After successfully completing the course, students are expected to understand how China exerts influence on international politics and contributes to world peace and prosperity through major international organizations.

Teacher: Dr. LIU Lianlian

Liu Lianlian is currently an assistant professor at the School of International Relations, Peking University. Liu received her PhD in law from Hong Kong Chinese University. She was also a visiting scholar at Research Center of International Law at Utrecht University. Her areas of expertise include international law and international organizations. Liu has published papers on distinguished academic journals both home and abroad and her journal article "The Global Anti-

Corruption Collaboration in Evolution: A Systematic Analysis of Historical Puzzles and Key Contemporary Questions” won 2016 Emerald Literati Network Awards of Excellence. Her new book The Global Collaboration against Transnational Corruption: Motives, Hurdles and Solutions will soon come out this year.

Sociology, Law and Political Studies

Understanding Frontier and Nation in Chinese History: A Sociological Approach

Credit and hours: 2 PKU credits, 30 credit hours

This class provides a sociological perspective on some critical changes in the Chinese major frontiers as well as the sociopolitical constitution of the Chinese nation from the high Qing period (roughly the 18th century) to most recent periods. In the first three class meetings, we will map out the conceptual construction of frontier and nation with representative sociological studies on China and other parts of the world. Then we will set the theoretical concept in motion, looking at the social dimensions of some impressive changes and events related to frontier and/or nation in Chinese history.

Particular emphasis will be devoted to discovering how frontier exists as a place in the spatial structure of the Chinese state. Meanwhile, we will also pay attention to the inhabitants of the frontiers, the people who are categorized as frontiersman in many historical writings. The social mechanisms that make the frontier as a particular space and a way

of living will be the subjects of the sociological frame we will build during the class. Under what conditions are frontiers peaceful attachments to the political management of the state? Under what conditions are frontiers turning disruptive to the whole polity? What is the relationship of frontier to the constitution of a nation? We will be comparing frontiers in different social contexts to develop our intellectual capacity to understand complicated historical transitions.

Teacher: Dr. TIAN Geng

TIAN Geng is an assistant professor of sociology at Peking University. Tian got his Ph.D from the University of Chicago in 2015 and then joined the faculty of Peking University. Tian's intellectual interests lie in political sociology, historical sociology, social theory and comparative political histories of state making. His dissertation studies the empire building process at Gansu, a longstanding focused region of the Chinese northwestern frontier, from the middle 18th century to mid-19th century. The empire building was embedded in both the formation of the political space and the forging of local ethnic identities. Tian reveals how the political forces worked in the two venues of empire building. Tian's current work continues his doctoral researches. He is working on both the manuscript and several journal article drafts.

Social Change and Social Problems in Contemporary China

Credit and hours: 2 PKU credits, 30 credit hours

This course tries to convey to the audience such a major theoretical imagination that the social problems that contemporary Chinese society currently faces are a social product of the combination of a fast-changing society and its structural manifestations, and the cultural legacy of a long history and its well-preserved tradition. Thus, the primary task of this course is first to describe the specific trajectory of Chinese social change from the establishing of the new

China, with a focus on the latest decades (1979-2017), and to introduce some of the theoretical approaches in Chinese sociology that attempted to understand such a great transition from the communism and planned economy, to a unique market economy with Chinese characteristics.

Also, in this course, some of the major social challenges and social problems have been discerned, and their social roots being analyzed. Of all these social challenges and social problems, environmental crisis, public epidemics (AIDS and others), drug abuse, the development and utilization of sex industry, population problems, and crises in major Chinese social institutions such as family, intimacy, education, healthcare, etc., have become major topics of the course. Students who are interested in understanding contemporary Chinese society will definitely have a much clearer vision after taking this class. A real chance to get into the field by appropriating a local-knowledge perspective

Teacher: Prof. LIU Neng

LIU Neng is a professor and the deputy dean in department of sociology, Peking University. He got his BA and MA in sociology from Nankai University (Tianjin) in 1992 and 1995 respectively, and got his PhD in sociology from Peking University in 1998. He joined the faculty of the Institute of Sociology and Anthropology (PKU) right after he got his PhD, and since then worked at the same institute for about 19 years (the Institute merged with the department of sociology at 2000). He was a visiting scholar at UC Berkeley from 2004 to 2005, and a senior visiting professor at ENS de Lyon, France in 2015. His main academic research concentrates on the Chinese way of urbanization from the perspectives of a moving population and a changing urban landscape. He also pays much attention to the political arena of social movements and collective actions, with a focus on the grassroots spontaneous demonstrations against a major local injustice, and the so-called middle class NIMBY movements. Other related research interests include consumption and life styles, youth subcultures, social change and social problems, deviance and crime, etc. He intensively uses quantitative and qualitative methods as well, acknowledging the strengths and weakness of both methods in various



stages of the research cycle. He published books and journal articles on Chinese urbanization, waves of Chinese collective episodes, and the changing Chinese lifestyles, and became an important original scholar in areas where he helped manufacture accumulative knowledge.

Chinese Constitutional & Administrative Law

Credit and hours: 2 PKU credits, 30 credit hours

This course introduces the history, institutions and theories of constitutional law and administrative law in China. It aims to have the students prepared for further and deeper understanding of Chinese politics, law, society, and culture. The administrative law section focuses primarily on institutional analysis. It briefs the major channels through which the Chinese citizens solve their conflicts with the administrative system, and the impacts made by such channels on the rule of law of China. The constitutional law section puts emphasis on history. It reviews the progress made by China in establishing constitutionalism, securing independence and sovereignty, and bringing about economic prosperity. The course also contains an introduction of the elements of current Chinese constitutional order. Most time of the course is reserved for lecturing, and students are encouraged to participate in class discussion. Reading materials will be offered. Background of legal education is not required but preferred.

Teacher: Dr. YAN Tian

Dr. YAN Tian is an assistant professor of the Law School of the Peking University. He earned bachelor and master degrees from the University, accomplished academic training in the Yale Law School with LL.M. and J.S.D. degrees, and spent two years as a post-doctoral fellow in Peking University before joining the faculty of the Law School. His research interest covers labor law, constitutional law, and administrative law. His book, Equal Rights Reform and Legal Change, has been published by the Tsinghua University Press in 2016. He wrote articles for academic journals in both Chinese and English languages. Professor Yan has taught Chinese and English courses in Peking University and Tsinghua University in the past several years.

Urban and Environmental Studies

Ecological Degradation and Restoration in China

Credit and hours: 2 PKU credits, 30 credit hours

Ecological degradation and restoration in China significantly contribute to environment of the Northern Hemisphere through dust release, climate feedback as well as carbon sequestration. This course introduces history of ecological degradation and restoration in China within the framework of global change, with focuses on climate change and land use history. Ecological policies for sustainable development promoted by the Chinese government will be clarified to international students. This course was taught in English to 14 students at Free University of Berlin in 2007.

Teacher: Prof. LIU Hongyan

LIU Hongyan is a professor of Ecology at Peking University, China. He received his B.S. in Physical Geography and M.S. in Environmental Geoscience from Peking University, and his Ph. D. degree in Botany from Leibniz University of

Hannover, Germany. He has investigated the Inner Asian vegetation for over 20 year. His current research focuses on climate-driven and human-driven vegetation dynamics in the arid regions of Asia at different time scales. He won the National Science Fund for Distinguished Young Scholar in 2013. So far he has published 75 papers in international journals. He is also the associate dean of research at the College of Urban and Environment Sciences of Peking University.

Prof. Liu has a broad international experience. In 2000-2001, he visited Department of Geography of the University of Calgary, Canada, supported by China-Canada Scholar Exchange Program (CCSEP). In 2005-2008, he was a Humboldt fellow at Potsdam Institute for Climate Impact Research (PIK), a world-famous institute in climate change, financed by Alexander von Humboldt Foundation. He has organized an international team to study Inner Asian vegetation since 2007. Currently he is a co-PI of a China-UK jointly supported project "Formation of ecosystem service and optimization of land use in the Karst Earth Critical Zone".

Urban Studies in Contemporary China

Credit and hours: 2 PKU credits, 30 credit hours

As the world is becoming increasingly urban, it is important to understand urban development in developing countries, where the majority of the world population lives and unprecedented urban transformation is taking place. In the last three decades, accompanying with successful economic transformation, China has experienced remarkable urbanization, which has generated both challenges and opportunities for China. Moreover, urbanization in China is unique in many aspects. This course will examine a variety of urban issues in the contemporary China. The first part will review the urbanization in the global context, which serves the context for further study of urban China. The second part is on the trend and the uniqueness of urbanization in China. Issues such as the socialist ideology and institutions, the Household Registration (hukou) system, rural to urban migration and globalization will be studied. The third part is on urban transformation, with particular focus on urban restructuring, urban land

and housing reform, urban infrastructure, and urban sustainability. The last part will deal with urban planning, urban management and governance in China.

Teacher: Dr. ZHU Shengjun

ZHU Shengjun joins the College of Urban and Environmental Sciences at Peking University (China) from Swansea University (UK), where he worked as a lecturer for two years. He received his Ph.D. in Geography at University of North Carolina at Chapel Hill (USA). Before coming to the University of North Carolina at Chapel Hill, he earned a Master Degree in Geography and a Bachelor Degree in Economics from Peking University, China. His major interests lie in globalization, regional development, global production networks, global value chains, industrial relocation and delocalization, industrial, social and environmental upgrading/downgrading. With his inter-disciplinary research and education background, Dr. Zhu is able to thoroughly investigate research questions and offer unique insights and perspectives. His papers have been published in some high-quality academic journals, including Journal of Contemporary Asia, Geoforum, Eurasian Geography and Economics, Geojournal and Post-Communist Economies. At the same time, Dr. Zhu has accumulated abundant industrial experience from various consulting projects.

Remediation of Contaminated Environment

Credit and hours: 2 PKU credits, 30 credit hours

Environmental pollution is a common problem all over the world, affecting the survival and development of human being. How to control and treat environmental pollution is an important task of the government's management. This course will introduce the basic theory, technology and practice of environmental remediation. There are five parts: (1) Development of environmental remediation; (2) Remediation of contaminated soil; (3) Remediation of contaminated groundwater; (4) Remediation of contaminated surface water; and (5) Remediation of contaminated





sediment. Various remediation methods such as physical, chemical, biological, and their combinations will be illustrated. On basis of domestic and international case studies, the investigation method, risk assessment method, monitoring method, remediation standard, laws and regulations, etc. will also be introduced.

Teacher: Dr. LU Xiaoxia

Dr. LU Xiaoxia is an associate Professor in the College of Urban and Environmental Sciences, Peking University, China. She obtained her doctor degree in environmental science from the Department of Urban and Environmental sciences, Peking University in July 2000. From August 2000 to August 2002, she conducted postdoctoral research in the Department of Environmental Science and Engineering at Tsinghua University. From September 2002 to September 2005, she conducted postdoctoral research in the Ground Water and Ecosystem Restoration Division of U.S. Environmental Protection Agency in the US. Her research area is environmental remediation. She is a member of several academic organizations including American Society for Microbiology, American Chemical Society, Chinese Society of Environmental Sciences, and the Geographical Society of China. She has hosted or participated in near 20 research projects, published over 70 peer-reviewed academic papers, and been granted 4 invention patents. She won the Science and Technology Award offered by the Beijing science and Technology Committee in 2005, and won the Science and Technology Award offered by the Chinese Ministry of Education in 2007.

City Transformation and Social Wellbeing in China

Credit and hours: 2 PKU credits, 30 credit hours

Cities are hubs for ideas, commerce, culture, science, productivity, social development and much more. At their best, cities have enabled people to advance socially and economically. Social wealth highly gathered in cities, which contribute 80% of the world GDP and accumulates 90% of the world property as well. China is entering in era of rapid urbanization period. In next fifteen year, there will be 350 million population swarming into cities.

The course introduces the history of China's cities; the process of urbanization and rural migrants; modernization of cities and city cultural conservation; city regeneration and social gentrification; urban heritages reuse and conservation;

suburbanization and middle-income class; high-speed railway and regional development; mega-city and urban agglomeration; urban traffic and transportation; cycling and green transport; urban governance and planning; city financing and investments; public participation. The major effects of city transformation on social and environmental development are discussed. The course also introduces social inequities and exclusion, environmental justice, urban poverty, informal development and slums. To sum up, the course has a key aim to show students a comprehensive and thorough image of city transformation and related social impacts in China.

Teacher: Dr. ZHAO Pengjun

Dr. ZHAO Pengjun is a professor in Urban and Transport Planning in the Department of Urban and Regional Planning, School of Urban and Environmental Sciences at Peking University. He is also the director of Centre for Urban Planning and Transport Studies at Peking University. He obtained his PhD degree and postdoctoral training in Urban and Environmental Planning at University of Groningen, the Netherlands. He has more than 10 years of professional planning practice experiences, of which three years were in WS/ATKINS UK Consulting Company (one of the largest infrastructure and planning consulting companies in the World) as an urban planner and project manager. His research mostly focuses on sustainable urban development and spatial planning, sustainable transportation, and low-carbon and healthy city. He has more than 110 research outputs of which above 30 are first-author articles in top-ranked international peer-reviewed SSCI journals, such as Urban Studies, Environment and Planning A, International Journal of Sustainable Transportation, etc. He was ranked as one of Most Cited Chinese Researchers by Elsevier in 2014, and in 2015 (15th of 33 listed researchers in social science). He has obtained more than RMB 7.2 million of research grants as the Principal Investigator (PI) for 22 research projects. He independently teaches 3 courses of urban planning and transport planning per term to undergraduate and graduate students, and supervises more than 15 students per year including postdoctoral researchers, master degree and PhD degree students. He services as associate editor and editorial advisory board member for several SSCI journals, such as Cities, Habitat International, etc.

Earth and Space Sciences

IR and its Application in Geosciences

Credit and hours: 2 PKU credits, 30 credit hours

Infrared spectroscopy method has wide applications in geosciences. In this course, the basic principles about the infrared spectroscopy will be introduced, the major components of the infrared spectrometer will be outlined, the experimental techniques specifically to some geomaterials will be demonstrated, and the applications of the IR in the broad research fields of geosciences will be presented with some geologically important examples. It is anticipated that after completing the course, the students will know how to use the IR technique to solve mineral structures, to quantify volatile concentrations, to extract thermodynamic properties, to probe reaction features, etc.

Teacher: Prof. LIU Xi

Prof Liu Xi obtained his PhD from Australian National University (2003), worked temporarily for Ehime University in Japan (2003-2005), for the University of Western Ontario in Canada (2005-2007), and for Peking University (2008-2013). Now he works as a tenured professor at School of Earth and Space Sciences, Peking University. Prof Liu once took some field trips and worked on the petrogenesis of granites and eclogites, but mostly he worked as an experimental petrologist on the phase equilibrium, phase transition, trace element partitioning, and dry/wet partial melting processes

of some important Earth-relevant composition systems by simulating the high-P and high-T environment of the deep interior of the Earth with the hydrothermal pressure vessel, piston-cylinder apparatus, cubic press, multi-anvil press, and diamond-anvil cell. Prof Liu also investigated intensively the equation of state, high-T elasticity, vibrational property and sound velocity feature of some Earth materials such as apatite, spinel and olivine by employing conventional XRD, synchrotron technique, Raman spectroscopy, infrared spectroscopy and other analytical methods. As a major contributor, he has published more than 60 peer reviewed papers.

Introduction to Cutting-edge Technologies in Spatial Computing

Credit and hours: 2 PKU credits, 30 credit hours

With the rapid development of spatial data acquisition methods, spatial information science and technology, named as 3S technology (Remote Sensing, Geographic Information System, and Global Navigation Satellite system) has become an indispensable interdisciplinary field and has extensive application domains, such as global change, natural resource survey, eco-environment monitoring, intelligent management of society and city, and so on. The traditional spatial information technologies gradually cannot cope with the new challenges (i.e., high concurrency, data-intensive, and computing-intensive). Also they cannot satisfy the latest application demands such as real-time perception, spatial-temporal data management, multi-dimensional visualization, data mining and knowledge discovery in specified fields. This course provides an introduction to the cutting-edge technologies of spatial computing for the international and domestic students. A lecture and discussion format is used in this class. Several hands-on experiences are used for developing student's programming skills. The course has 16 classes and 30 credit hours.

Teacher: Dr. LI Mei, Dr. Hang Zhou

Li Mei is the associate professor with the Institute of Remote Sensing and Geographic Information System, Peking University. She was also a visiting scholar at George Mason University from 2014 to 2015. She received her Ph.D. in cartography and geographical information science at Peking University and her research mainly concerns with 3D Geographical Information System, theory and technology of spatial information visualization and digital earth. Li has already published 24 papers and 2 books. She has been involved in 11 funding projects and was granted first prize of Science and Technology Progress Awards offered by Ministry of Education in 2008 and first prize of Chinese Youth Remote Sensing Debate in 2010.

Huang Zhou is the associate professor in School of Earth and Space Sciences and the undergraduate classes advisor at Institute of RS and GIS, Peking University. He received his PhD in geographical information science at Peking University. He teaches courses such as principles of software engineering, principles of operating system and distributed GIS Technologies. Dr. Huang has already published 10 journal papers and was granted ICBC (Industrial and Commercial Bank of China) Fellowship (2013), excellent postdoctoral award (2012) and excellent PhD Dissertation Award (2011).

UAV-based Remote Sensing Technologies and Applications

Credit and hours: 2 PKU credits, 30 credit hours

This course focuses on current cutting-edge Unmanned Aerial Vehicles (UAV) remote sensing technologies and applications. The following topics will be mainly addressed in the course: the state-of-the-art of UAV remote sensing development, integration and data acquisition of UAV remote sensing systems, mosaicking of large-volume UAV

remotely sensed images, 3D reconstruction from UAV image sequences, remote monitoring by UAV, and some typical case studies such as UAV remote sensing in agriculture (e.g. precision farming in arid regions), integration of multiple UAV data (e.g. use of UAV LIDAR and multispectral data in the monitoring of road pavement health conditions), and UAV techniques for emergency response. This course aims to train graduate students grasp new technologies and applied approaches of UAV remote sensing, and to spark their interests in related research.

Teacher: Dr. SUN Min, Dr. ZHANG Xianfeng

Sun Min is the associate professor with the Institute of Remote Sensing and Geographic Information System, Peking University. He was once a postdoc at Peking University and a visiting scholar at Berlin University and Kiel University, Germany from 2014 to 2015 and have already published over 50 papers and have seven patents granted. His research interests mainly include UAV data acquisition, large-volume UAV images mosaicking, 3D information retrieval and reconstruction, and UAV remote monitoring based on augmented reality. He teaches the courses at Peking University such as Geomatics, Digital Terrain Model, and GPS survey and data processing.

Zhang Xianfeng is the associate professor with the Institute of Remote Sensing and Geographic Information System, Peking University, and is recruited into the Oasis Scholars Program of Shihezi University. He mainly works on remote sensing for ecology, remote sensing for natural disasters, and UAV remote sensing applications. He received his PhD from the University of Western Ontario, London, Canada. Dr. Zhang has already published 95 papers and four books/chapters. He was granted the first-class Award of Scientific and Technologic Progress in Xinjiang Corps in 2014, and Peking University Zhengda Prize of Teaching and Research in 2015. He is currently co-chair of the ISPRS WGIV3 work group, and member of ICA Satellite Remote Sensing Mapping Commission. He teaches/ taught the courses such as Remote Sensing for Ecology and Environment, Introductory Earth Science, Progress in Geography, Remote Sensing Applications and Hyperspectral Remote Sensing, etc.



Introduction to Space

Credit and hours: 2 PKU credits, 30 credit hours

This course mainly introduces the space environment near the Earth, various kind of space weather storm activities, and space explorations of mankind, which are actually closely related to our daily lives. Space energetic electron storm, aurora, planetary sciences etc. will be covered. The fundamental knowledge of the Earth and space sciences and its related to human activity and development will also be discussed.

Teacher: Prof. ZONG Qiugang

Prof. Zong Qiugang is currently the director at Institute of Space Physics and Applied Technology and Center for Space Science Exploration, Peking University. He received his PhD from Braunschweig University of Technology in 1999 and has conducted researches in a number of universities include U Mass Lowell (2006-2007), Boston University (2001-2006), Max-Planck Institute fur Aeronomie (2000-2001) and Waseda University (1999-2000). Prof. Zong was granted the Honour of Excellent Young Scientist Chinese Academic of Science in 1992, Japan Society for the promotion of Science Fellowship Award in 1999, Chinese national Award for the Promotion of Science and Technology in 2001, three academic achievement awards (2004, 2005, 2010 respectively) as well as Peking University Outstanding Teacher Award (2013). Prof. Zong has published a total of 215 scientific publications in referred journals (including 73 as the first authors) and has given 87 scientific talks in the international conferences. He was also the editors for several distinguished academic journals.

Innovation and Entrepreneurship

Entrepreneurial Finance

Credit and hours: 2 PKU credits, 30 credit hours

The course will cover financial issues throughout the life cycle of a startup venture, with emphasis on early stage financing. Topics include fund raising, corporate venture, and capital market exit. Students may learn the subject from an angle of either an entrepreneur or a venture capitalist. Curriculum will try to strike a balance among theoretic foundation, practicality, and China characteristics. Therefore, the format of the course will combine classroom lecture, guest speaker, and site visits. Classroom lecture is case based. Before-class preparation and in-class participation are highly expected. Practitioners (startup founder, venture capitalist, lawyer, etc.) will be invited to class to share real life experience. Site visits will help students understand unique entrepreneurship ecosystem in China. Host sites include Innovation Works, Plug and Play China (from the US), Infinite Venture Capital (from Israel), etc.

Teacher: Dr. GAO Yan

GAO Yan is a professor of Management Practice and the deputy director at Center for Innovation and Entrepreneurship at Peking University's Guanghua School of Management. Prior to joining PKU, Professor Gao had held faculty, visiting, and lecturer positions at China Europe International Business School (CEIBS), California State University, Baruch College (City University of New York), and Northwestern University. Before his academic career, Dr. Gao worked as financial analyst in Merrill Lynch Co. and Cathay Financial LLC in New York. After coming back to China, he has worked as partner at a fund of VC fund for Guizhou provincial government, partner of FDT Securities in Hong Kong,

and as advisor at leading private equity fund (New Horizon Capital) and hedge fund (K2 Advisors). Dr. Gao's current industry affiliations include co-founder and director of high-tech company MakeSense Inc., co-founder of a China-Japan business consulting firm (经纬商务), and director of listed company Xingyuan Environmental Technology. Dr. Gao is a CFA charter holder who help brought CFA program into China in 1999. He is also former vice president of The Chinese Finance Association (TCFA) in New York.

Research, Innovation and Entrepreneurship in China

Credit and hours: 2 PKU credits, 30 credit hours

Using classic case studies as the entry point, this course systematically explains the general trends of collaboration in technology transfer in China and overseas, with the purpose of giving students an in-depth understanding of the significance and ways of innovation and cooperation during the process of technology transfer. This course will focus on government, enterprises and universities, which are regarded as three fundamental elements in technological innovation and industrialization process. These three elements are in different positions and are assigned to different functions in China and overseas. In China, by producing industrial policy, Chinese government offers essential support for the universities' technology transfer process. Enterprises, which are treated as the main body of technology transfer collaboration, assume the responsibility of exploring new market and leading technology transformation. Universities serve as the bond that connects scientific and technological achievements with the whole industry, indicating the core competitiveness of the technology transfer. Beside those three elements mentioned above, financial capital is also indispensable during the industrialization process. This course allows students to systematically sort out the relationships of scientific research, innovation and industrialization from different points of view while establishes a true communication platform for technology transfer.

Teacher: LI Yongmei

Li Yongmei is currently the assistant dean for development, administrative supervision and technology transfer, the director of Innovation Education Center in College of Engineering, Peking University and the associate dean of Institute of Innovation in Peking University. Li received both bachelor (1992) and master degree (1995) in Peking University, was chosen to study overseas on a government sponsorship (1998). Prior to her study abroad, Li served as general manager assistant in Multimedia Business Department and was in charge of software development and market information affairs in Founder Group (1995-1996). From 1996 to 1998, Li worked in IBM China as marketing manager and then worked in Peking University Educational Foundation as senior object specialist successively. After receiving her MSc in Public Management and Management Information System in Carnegie Mellon University in 2000, Li worked as senior business analyst in Carat Group/MMA Incorporated for more than 9 years. Li is specialized in innovation and entrepreneurship education in the field of engineering, university funding mechanism set-up, impact investing, public relation and new media study. Her relevant works, which range from national and university major research project, monograph, book to dissertation, have become hot research topics.



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