

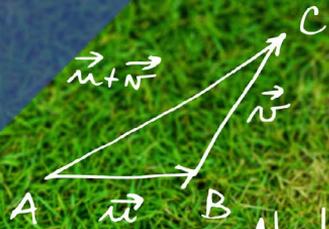


# 上海交通大学

SHANGHAI JIAO TONG UNIVERSITY

## Shanghai Jiao Tong University Summer Session

July 6 - August 2, 2015

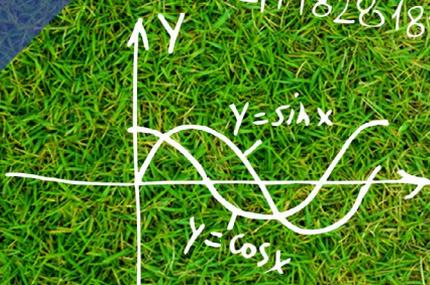


$$y = ax^2 + bx + c$$

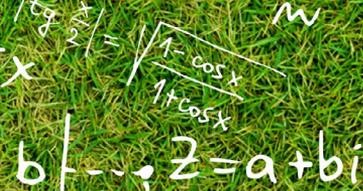
$$x_{1,2} = \frac{-b \pm \sqrt{D}}{2a}$$

A	B
1	1
1	0
0	0
0	1
0	0

$e = 2,718281828$



$$\bar{x} = \frac{\sum_{j=1}^n x_j \cdot n_j}{n}$$



$$P(A) = \sum_{\omega \in A} p(\omega)$$



1.  $A \cap B'$
2.  $A \cap B$
3.  $A \cup B$
4.  $A \cup B'$





# Welcome to Shanghai Jiao Tong University

Established in 1896 as Nan Yang College, Shanghai Jiao Tong University is one of the first national institutions of higher learning in China. The name "Jiao Tong" comes from the book Yi Jing. Literally, "Jiao" means unite and "Tong" means harmony. In the book it says, when heaven and earth unite in deep harmony, peace and blessing descend upon all living things; when leaders and people unite and combine their influences, the nation enjoys universal flowering and prosperity.

SJTU, as it is fondly called, is a dynamic and comprehensive university for excellent education, cutting-edge scientific research and social service. From the early stage of its development, SJTU took first-class talents education as its principal mission. And today, it has been developed to the talent education idea of knowledge exploration, capacity development and personality nurturing.

Today SJTU has 31 schools (departments), 63 undergraduate programs, 250 masters-degree programs, 203 Ph.D. programs, 28 post-doctorate programs, and 11 state key laboratories and national engineering research centers.

SJTU boasts a large number of famous scientists and professors, including 40 academics of the Academy of Sciences and Academy of Engineering, 95 accredited professors and chair professors of the "Cheung Kong Scholars Program" and more than 2,000 professors and associate professors.

Its total enrollment of students amounts to 37,452, of which over 5,900 are international students. There are 19,632 undergraduates. After more than a century of operation, Jiao Tong University has inherited the old tradition of "high starting points, solid foundation, strict requirements and extensive practice." Students from SJTU have won top prizes in various competitions, including ACM International Collegiate Programming Contest, International Mathematical Contest in Modeling and Electronics Design Contests.

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## PROGRAM OVERVIEW

In the year of 2015, Summer Session of Shanghai Jiao Tong University offers a 4-week intensive short term program which will run from July 6<sup>th</sup> to August 2<sup>nd</sup>, 2015. Students from around the world are invited to study in a welcoming environment that appreciates diversity and global perspectives.

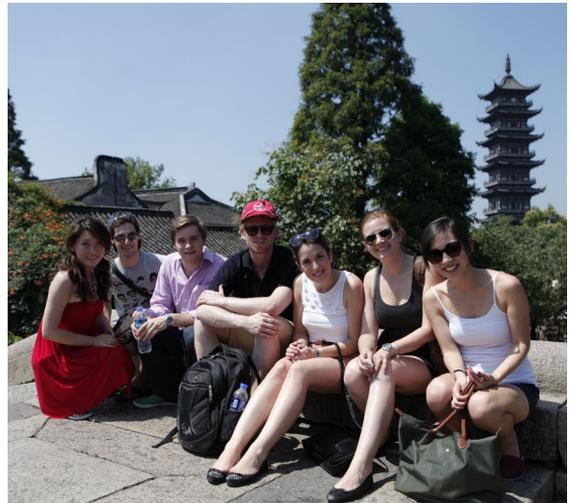
SJTU 2015 Summer Session offers academic courses in the field of Natural Sciences & Engineering as well as Social Sciences & Humanities including Chinese as a Second language. Furthermore, it also provides Chinese cultural experience courses including Chinese calligraphy, Chinese martial arts.

Except course studies, we will also arrange extracurricular activities such as city tours, field trips to nearby cities, visits to international corporations and NGOs, during which SJTU students will join the program together as buddies.

## ELIGIBILITY

- Non-Chinese Citizens
- Above 18 years old
- Currently attending colleges
- Proof of proficiency in English
- Other required documents if necessary

Held at Shanghai, one of the most dynamic cities in China, SJTU 2015 Summer Session has been designed to offer students the studying opportunity together with top Chinese students as well as a unique learning experience towards the broad and profound culture and heritage of China.



## Contact Information

International Mobility Office, International Student Center, Shanghai Jiao Tong University  
Room 302, Old Administration Building  
No.800 Dongchuan Road, 200240  
Shanghai, China  
Tel: 86-21-34203803  
E-mail: [isc.mobility@sjtu.edu.cn](mailto:isc.mobility@sjtu.edu.cn)  
<http://icae.sjtu.edu.cn>

## APPLICATION

Applying to SJTU 2015 Summer Session requires the successful completion of a selective application process. Please note the whole application process will be done online. Once your application is complete, your application will be submitted to the selection committee for consideration, normally, you should expect to get the result of your application within two weeks or less from the moment that your application is complete and the application fee is paid.

Please check the website of SJTU International Student Center (<http://isc.sjtu.edu.cn>) to get the link of online application system at the beginning of March. Online application instructions will be available by then as well.

### Applicants from University-wide Exchange Partners

Based on bilateral university-wide exchange agreements, exchange partners can nominate students to participate at the SJTU 2015 Summer Session according to the placement balance of the academic year of 2014-15. Application fee and tuition will be waived for the exchange students. Due to the course load in this program, 2 summers placements will be equivalent to 1 semester placement. The coordinators from partner universities are expected to send the nomination form (available at the website) to [isc.mobility@sjtu.edu.cn](mailto:isc.mobility@sjtu.edu.cn) once the application begins. A soft copy of online nomination and application instructions will be sent to you shortly afterwards.



## REQUIRED DOCUMENTS

- Copy of completed "Application Form" with signature
- Photocopy of passport information page
- Curriculum Vitae
- Certificate of Enrolment
- Academic Transcript
- Copy of previous diploma(s) obtained (if applicable)
- Proof of proficiency in English (for students who use English as a second language or studying in non-English-speaking countries)
- Motivation Letter (limited to 1000 words or less)

## TUITION & FEES

### Application fee: CNY 400

Application fee should be paid within 24 hours after online application being submitted. Please note the application fee is non-refundable.

### Tuition: CNY 8,800

### Early Application Discounts

Students who complete their online application and pay for the tuition before the 30<sup>th</sup> April 2015 will receive 20% discount of the tuition.

### Partner Discounts

Students registered at one of our partner universities or partner institutions of U21, AC21 and GlobalTech will receive a 20% discount off the tuition fee.

**Application Deadline:  
May 31<sup>st</sup>, 2015**

*\* Please note all application procedure will be done online, no more paper application materials are required.*



### Accommodation Fees

Double room: CNY 80/day

Single room: CNY 140-150/day

Please note the following are not included in tuition fees and must be arranged directly by each student: transportation to and from the summer session, food and housing, fees maybe caused from the extracurricular activities.

## CERTIFICATE & TRANSCRIPT

SJTU will award a Certificate of Attendance to students who successfully complete the programme as long as they do not exceed the limit of two absences per course.

An official transcript from Shanghai Jiao Tong University will be sent to the students before October. Credit obtained at the summer session shall be awarded at the discretion of each student's home university. We strongly encourage you to confirm with your home university before applying. If you need further information of the courses, please feel free to contact us.

## ADMISSION & VISA

If the applicant selects no less than 3 credits, SJTU will provide the visa application form (JW202 Form). Applicant can bring the visa paper, Admission Notice as well as a valid passport to the Chinese embassy or consulate to apply for a short term student visa (usually the visa type is 'X2'). Those who are already in China need to submit a copy of the visa page together with other application documents.

The JW202 Form and the Admission Notice will be sent to the applicant by the international courier within two weeks after the approval of the application.



## INSURANCE

- Applicant should buy travel insurance and the insurance purchase should cover the summer session. If applicant won't buy any insurance in the home country, please buy a "Personal Accident Insurance" on the registration day at SJTU.

- In order to guarantee you more indemnity in the unpredictable future, we'd like to recommend a very valuable and suitable insurance policy for this summer session period here by China Life Assurance. It is a Traveler's Accident Insurance, which offers you 60-day-long insurance and costs 100RMB.

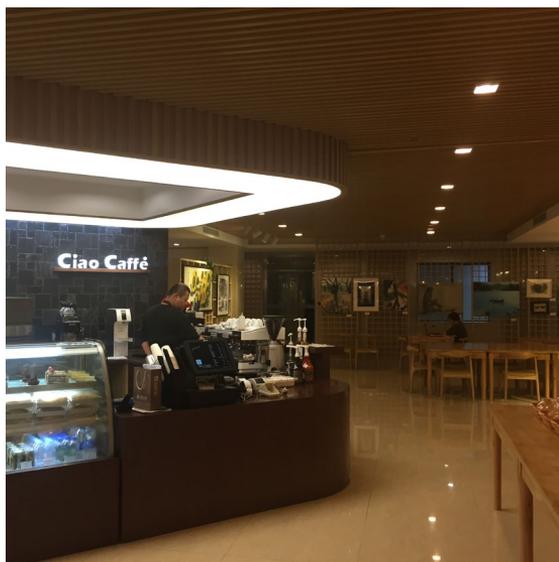
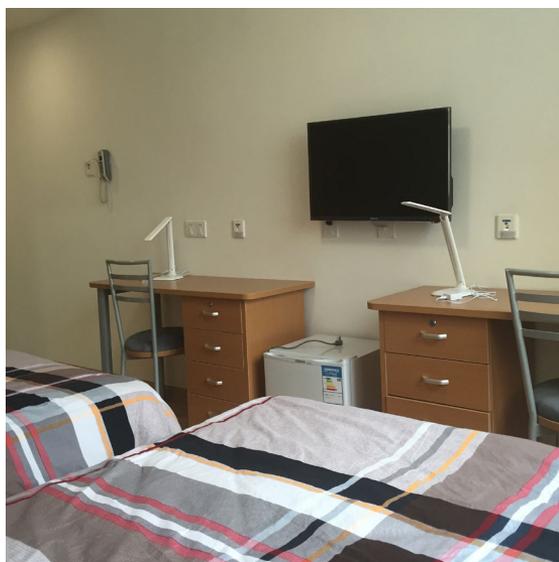
With just 100RMB premiums, you can get the essential guarantees in the coming 2 months as following:

1. 100,00RMB indemnity for accidental injury or death;
2. 5000RMB indemnity for accidental medical service;
3. 50RMB/day compensation for accidental in-patient treatment.



## ACCOMMODATION

Room reservation should be made online <http://202.120.5.182/res> from June 15<sup>th</sup> to June 21<sup>st</sup> on receiving the Admission Notice. No reservation will be accepted when the dormitories are full. The accommodation fee should be paid online and is non-refundable. Applicants who successfully book the reservation can check-in as early as July 4<sup>th</sup>, 2015 and check out as late as August 2<sup>nd</sup> before 12pm.



*\*For more details about the accommodation, please contact International student service Center.  
Email: [issc\\_sjtu@163.com](mailto:issc_sjtu@163.com)*

## COURSE SELECTION

- Applicants are required to choose at least 3 credits from the course list. Please arrange your time appropriately according to the course schedule which will be available online at the end of March on our website.
- 1 credit requires 4 teaching hours per week, as for non-credit based courses, we offer each course 1.5 hours per week.
- Please email the list of the courses he/she selects to [isc.mobility@sjtu.edu.cn](mailto:isc.mobility@sjtu.edu.cn) with the subject "Applicant Name + Course list" before June 7<sup>th</sup>, 2015; SJTU endeavours to open all the courses as promoted. However, we do not rule out the possibility that a course maybe cancelled due to insufficient enrolment numbers.

## COURSE LIST

<i>No.</i>	<i>Course Title</i>	<i>Course Category</i>	<i>Credits/Hours</i>	<i>Instructor</i>
01	Gene and Man	Natrual Science & Engineering	2/32	LI Dawei
02	Simulation and Control of Dynamic Systems	Natrual Science & Engineering	2/32	LU Bei
03	Mechanical Behavior of Engineering Materials and Structures	Natrual Science & Engineering	2/32	JIANG Yanyao
04	New Energy System	Natrual Science & Engineering	2/32	Yunho Hwang
05	Production Systems Engineering	Natrual Science & Engineering	2/32	LI Jingshan
06	The Mystery of DNA: Origin, Evolution, Damage and Disease	Natrual Science & Engineering	2/32	CAO Weiguo
07	Nanotechnology and Surface Science	Natrual Science & Engineering	1/16	WU Yongling
08	Gas Turbine Combustion	Natrual Science & Engineering	1/16	Robert Cheng
09	Sustainable Energy Technologies	Natrual Science & Engineering	1/16	Patrick Chi Kwong LUK

<i>No.</i>	<i>Course Title</i>	<i>Course Category</i>	<i>Credits/Hours</i>	<i>Instructor</i>
10	Refrigeration and Heat Pumping Processes and Systems	Natural Science & Engineering	2/32	Trygve Eikevik
11	Introduction of Automobiles	Natural Science & Engineering	1/16	YU Fan
12	Introduction to 3D Display Technologies	Natural Science & Engineering	1/16	LI Yan
13	Beautiful Silence of Engineering Discussion: the Art, Music and Philosophy of Engineering	Natural Science & Engineering	1/16	RAN Hongjuan
14	Representations of Quivers and Algebras with Applications	Natural Science & Engineering	1/16	Claus Michael Ringel
15	Selective Reading of Shakespeare	Arts & Social Science	2/32	LI Zheng
16	American Culture Under the Historical Perspective	Arts & Social Science	2/32	Matthew Wei
17	Exploring English Essay Classics	Arts & Social Science	2/32	Joesph Lu
18	English Public Speaking	Arts & Social Science	2/32	ZHAO Xiaohong, YANG Xiaoling
19	Academic Communications in English	Arts & Social Science	2/32	ZHANG Li
20	Regulations over IPR Licensing-A Comparative Perspective between Chinese Antimonopoly Law and Korean Competition Law	Arts & Social Science	2/32	LI Huang, WANG Xianlin
21	China and U.S. Comparative Environmental Law and Governance	Arts & Social Science	2/32	Dan Guttman
22	Global Administrative Law & Regulatory Policy	Arts & Social Science	2/32	Robert V. Percival
23	International Politics	Arts & Social Science	2/32	Manochehr Dorraj
24	Spanish Culture-Based on History and Arts	Arts & Social Science	2/32	Rafael Martin Rodriguez
25	Rousseau and His Thought	Arts & Social Science	2/32	Christophe Van Staen
26	Ecological Criticism Today	Arts & Social Science	2/32	Janell Watson

<i>No. Course Title</i>	<i>Course Category</i>	<i>Credits/Hours</i>	<i>Instructor</i>
27 Modern Ethics	Arts & Social Science	2/32	Antoine Guggenheim
28 The United States in a Global Perspective	Arts & Social Science	2/32	Don Schwartz
29 China's History and Culture	Arts & Social Science	2/32	GUO Liandong
30 Nobel Prize Winners	Arts & Social Science	1/16	Angelica Duran
31 Western Myths, Western Values	Arts & Social Science	1/16	Keith Dickson
32 Sleeping Beauties Awake: Language Revival, Cross-Fertilization and Social Wellbeing	Arts & Social Science	1/16	Ghil'ad Zuckermann
33 Chinese Language	Language & Culture	2/32	
34 Chinese Calligraphy	Language & Culture	0/6	
35 Chinese Martial Arts	Language & Culture	0/6	
36 Tai-Chi	Language & Culture	0/6	

*\*Please note this list is not the final version, if the enrolment for one course is less than 10, the course will be cancelled, we will publish the final course list and schedule on our website at the end of March.*

## COURSE INTRODUCTION

### 01 Gene and Man

Gene and Man is a course to show the everlasting natural laws behind life with the scope of science and logic. This course is supposed to show the essence and mechanism of the evolution of all living things, including human beings, and the laws which human beings follow to develop themselves. The course follows the central dogma as a skeleton to show the fundamental mechanism of life, including some social phenomena and their trends. This course focuses on the scientific literacy and logistic way of thinking on the hot topics related to life and bioscience. The contents of this course at least include these topics as follow.

- 1 Does life obey scientific principles?
- 2 Why all life forms have genes?
3. The Gene Centric view of living world
4. Life is the performing stage of genes
5. Genes and environment, behavior and learning
6. Genes survive through competition
7. Changing genes and human civilization
8. Genes: the origin of social development

The aim of this course is to let the students of different backgrounds know the essence of life, the genes to support life phenomena and the link between gene and life. In addition, this course emphasizes on enhancing the students' abilities to search for truth and authorized information, which may improve their scientific literacy. Moreover, this course encourages students to collaborate with each other and to improve their comprehensive abilities through team work.



## **02 Simulation and Control of Dynamic Systems**

An introduction to simulation and control of dynamic systems in the areas of aerospace, mechanical, and electrical engineering. Topics include: (1) modeling and simulation of simple dynamic systems, with emphasis on system representation using mathematical expressions and block diagrams, as well as modeling, simulation, and analysis of dynamic systems using MATLAB; (2) control theory and design, with emphasis on the concept of feedback control, design of proportional controllers, as well as computer-aided control design using MATLAB.

## **03 Mechanical Behavior of Engineering Materials and Structures**

The course is a general introduction of mechanical behavior of engineering materials and structures. It will cover a wide range of the mechanical behavior of various materials and structures: plastic deformation, creep, static failure, cyclic loading, fatigue failure, fracture, rolling contact, durability of fasteners, and high temperature behavior. At the same time, development of researches related to mechanical behavior of engineering materials and structures will be introduced using layman's terms. Discussions inside and outside classroom are encouraged.

## **04 New Energy System**

The course is open to undergraduate students. Scientific background about solar, wind, hydroelectricity, hydrogen, biomass and geothermal energy, their production methods as well as main storage technologies will be discussed. The efficiency, impact of the various energy production, application and storage technologies will be quantified. The feasibility, environmental as well as economic cost of the most prominent sustainable energy production methods. The challenges to achieve sustainable energy production will be discussed. After successful participation in this course students will be able to assess technological aspects related to alternative energy and have the foundation for advanced study of energy topics.

This course aims to give an interdisciplinary introduction to concepts of alternative energy production and the main alternative energy technologies and to build foundation for students who have interest to conduct research of Alternative Energy Technologies.

## 05 Production Systems Engineering

The purpose of this course is to expose students to novel methods for analysis, design, and continuous improvement of production systems in large volume manufacturing, in other words, a quantitative approach to lean production systems. The aim is to present the material at the same level of rigor as that in other engineering disciplines, such as Electrical Engineering, Mechanical Engineering, etc. The emphasis is the rigorous engineering study of practical issues related to parts flow in production systems with unreliable machines and finite buffers. The course material is based on long time industrial studies and experiences by the instructor and his colleagues in various manufacturing plants. Every problem considered in this course originated on the factory floor and, after appropriate conceptualization and analysis, ended up as an application on the factory floor; the case studies included in this course describe some of these applications. The course will be addressed in the framework of stochastic models of production systems at hand.

## 06 The mystery of DNA: origin, evolution, damage and disease

Introduce the early origin, transformation, and evolution of genetic materials beginning from the onset of the Earth; the adaptation of life forms and DNA evolution; DNA and sustainability of life forms, DNA damage, mutation, repair and its relationship with a variety of diseases (in particular with genetic diseases and cancer).

## 07 Nanotechnology and Surface Science

This course mainly introduces the basic knowledge of the nanomaterials and its applications in surface engineering field. Main contents include: the basic concept of nanometer materials, structures and characterization methods, preparation technology, the latest research progress; the formation of surface functional coating materials associated with combining mechanism, synthetic technology and basic principle, surface modification of nanomaterials, etc. The course highlights nanomaterials and surface science.



## 08 Gas Turbine Combustion

Lean premixed combustion is the technological basis for the “Dry Low NO<sub>x</sub>” (DLN) method being deployed in advanced gas turbines for emissions control. The basic approach is to lowering the flame temperature through excess air dilution. However, dilution also weakens the flame. Therefore, the means to stabilize lean premixed flames is critical to the design and development of clean and efficient gas turbines. This course will give a background to flame stabilization methods and their underlying mechanisms. The students will learn about the basic processes associated with these mechanisms such as turbulent flame propagation, turbulent flame speed, flame turbulence interaction as well as flame instabilities. Understanding of these processes are the foundations for the development of turbulent combustion theory.

## 09 Sustainable Energy Technologies

Climate change, pollution and energy shortage are three of the biggest challenges facing mankind today. Peak oil supply has passed and the world’s energy demand continues to accelerate, creating a real crisis for energy sustainability. Most of the world’s energy is driven by fossil fuels which release large amounts of CO<sub>2</sub> into the atmosphere, creating climate change. New engineering, cost effective solutions will need to emerge to help satisfy the need for energy and to tackle the many issues surrounding sustainability. This course aims to provide students with the awareness of the challenges of sustainability, and equip them the necessary knowledge to develop an appreciation of new and innovative technologies to meet these challenges. A range of technology areas, including renewable and electrical engineering, will be presented in a systematic, logical and lively manner. The course will be conducted by means of lectures, video aids, and case studies. Some of the special features include the lecturer’s multi-million pound strategic research projects funded by the UK government.



## 10 Refrigeration and Heat Pumping Processes and Systems

This course deals with heat pumping processes and systems applied in different kinds of refrigeration units, from smaller plants in domestic units and supermarket, to industrial plants in food and process industry, including gas liquefaction. Historic development and importance of refrigeration technology. Thermodynamic analysis of different refrigeration processes; with special emphasis on thermodynamic losses. Properties of working fluids, including effects on the environment. Natural, environmentally friendly, working fluids. Refrigeration system components, including compressors and heat exchangers. Component design. System solutions for different kinds of applications, both refrigeration and heat pump systems.



## 11 Introduction of Automobiles

As a major tools of transportation, automobiles not only meet the transportation demand on road/off road, but also satisfy the human's desire for speed, culture and passion. This course is to help students cultivate an interest in automobile industry and relevant culture, as well as to understand the fundamentals and specialized English on automotive. By introducing the colorful culture and the designing philosophy of the automotive industry, this course is expected to broaden the students' horizon through interactive discussion and communication. As a bilingual taught course, it consists of six major subjects, including 1) Introduction and Classification; 2) History; 3) Structure and Operation; 4) Designing Philosophy; 5) Brand Culture, Race Cars and Exhibitions; 6) The Future development. search projects funded by the UK government.

## 12 Introduction to 3D Display Technologies

Three-dimensional (3D) display is an ultimate display technology. From the theaters to TVs at home, to naked eye mobile devices, 3-D displays have been gaining popularity in our daily lives.

This course will systematically introduce state-of-the-art 3D display technologies, outline the physical fundamentals, illustrate the operation principles and outlook the research trends of 3D display technologies. It would cover the following parts:

- 1) A brief introduction to the state-of-the-art 3D display technologies and research trends would be presented to the students firstly, then the most fundamental physics of 3D displays, including the 4 main physical 3D depth cues, will be illustrated. Physical 3D depth cues enable the perception of objects in three dimensions and the estimation of distance, and thus serve as the foundation of all 3D display technologies.
- 2) Some of the most common display devices such as LCDs and OLEDs will be introduced, in terms of display materials, device structures, working principles and research trends, which would pave the way for the learning of 3D display technologies in the succeeding sections.
- 3) Two types of 3D displays based on disparity depth cue would be presented in terms of operating principles and research trends: stereoscopic and autostereoscopic displays. The cause of 3D visual fatigue effects in these displays will be explained based on the knowledge of physical 3D depth cues.
- 4) Several quasi-true 3D displays, including holography, integral imaging, volumetric 3D displays, light field displays will be introduced in terms of operating principles and research trends. By presenting multiple physical depth cues to the viewer, quasi-true 3D displays would greatly reduce 3D fatigue and improve the visual experience.

At the end of the course, students are required to participate in a debate or group presentation regarding “the most promising 3D technology”. Both technical understanding and presentation skills will be evaluated.



### **13 Beautiful Silence of Engineering Discussion: the Art, Music and Philosophy of Engineering**

This course is for the bachelor and master candidates of engineering, and it is as a mix courses between nature science and art filed.

Main task: Based on the history of engineering and its research method, we will show the roles of music, art, and philosophy in the development of engineering, mainly including the beauty of simplicity of in the engineering, and logical thinking of philosophy in the engineering.

### **14 Representations of Quivers and Algebras with Applications**

Representations of quivers and algebras are widely used in several branches of mathematics. In this course we only assume the prerequisite of Linear algebra. It is assumed to be a course for under-graduate students and also for graduate students, from Department of Mathematics, Zhi-Yuan College, and from all other colleges who are interested in. The main teaching contents include: Vector spaces with two chains of subspaces; Quivers and representations of quivers; Reflection factors; The Kronecker quiver; Decomposing representations; Complement bases; Strings; Walks; Isomorph of intervals.

### **15 Selective Reading of Shakespeare**

This course aims at giving a broad introduction to Shakespeare's dramatic works from a variety of thematic, historical or formal vantages. Approaches taken to the plays may include a chronological introduction to the development of Shakespeare's plays with considerations of principal themes through a number of Shakespearean plays in historical context. Students are required to read original versions of Shakespeare's dramatic works and prepare for text-analysis, in-class discussion, themed writings and performance.

Critical thinking is of vital importance in class-participation, panel discussion and group-presentation. The course encourages the students to render theoretical as well as aesthetic evaluations and exchange their own thoughts in class. Learning outcomes

Students would be familiar with major dramatic works by Shakespeare and main elements of a play. They would also be required to understand and apply the general approaches to analysis of dramatic works.

## 16 American Culture Under the Historical Perspective

The main concern of this course is continuity and concentration rather comprehensiveness. It tries to highlight the most significant figures and events in American history from the development of the colonies to the 20th century. Some minor happenings bubble around the major events, whose chronological sequence are strictly observed as carefully as possible, thus furnishing students with a linear, therefore clearer, narrative thread in the text. Strenuous efforts are made to guide the students through a complex yet coherent story, a story easier to grasp than the many voluminous books, a story meandering here and there yet streamed together with many salient figures and events, and a story containing a great reservoir of important vocabulary with profound, significant, and interesting historical repercussion. Every chapter has its own chronological table, listing not only important events in American history, but also some historical landmarks in European history and Chinese history, so as to provide the students with some striking comparable landmarks. For language-conscious students wishing to learn English in an efficient way, the historical text would provide an excellent context where the students could efficiently improve their English through discussing fascinating figures and events. The comparative continuity of the text would help students sustain their interest in English; the historical realities in the text would help enhance their desire to delve further into the historical background. Once they learn to talk about the kaleidoscopic spectrum of American civilization, students will be better motivated to acquire a mastery of English.

## 17 Exploring English Essay Classics

This course is a selection of English essay classics, including representative essays written by Francis Bacon, William Somerset Maugham, Charles Lamb, E.M. Forster, Bernard Shaw, Virginia Woolf, Jan Morris, etc. The essays to be lectured in class are of high aesthetic value and profound implications. This course is conducted through text in-depth reading, theme discussion, group presentation, debate and after-class reading with a view to enhancing the students' comprehensive and evaluative competences, improving their writing skills and in turn raising their humanistic awareness. The well-written essays to be explored in class help a lot to enliven the classroom, arouse the students' strong interest in English essays. Students can learn about how great essayists compose their great pieces, how they choose words and sentence structures, etc... This course also has a part to play in cultivating students' humanistic quality.

## 18 English Public Speaking

As an art of language, public speaking provides the speakers with the opportunity to convey information, share ideas or express feelings. The course aims to give students formal instructions on how to prepare and deliver three most important types of public speeches, namely, informative speeches, persuasive speeches, and impromptu speeches. After the introduction of theories concerning these types of speeches, each student will be given opportunities to practice. This course also aims to improve students' general speaking ability by getting them involved in a variety of class activities, including pair and group discussions, recitation and appreciation of famous speeches or essays, etc. Through taking this course, students are expected to speak in public professionally, with improved ways of organizing information and ideas, and with enhanced self-confidence and expressiveness of message. Students are also expected to be able to communicate across cultures more effectively.

## 19 Academic Communications in English

The course is designed to help students enhance their academic communication skills and confidence through instruction and practice of academic writing and presentation so that they will be able to write and present in real academic communications in the future. Students will be provided with the methods to plan, research, organize, write, edit, and evaluate various forms of academic communication. It is also intended for improving your ability of presentation for seminars and conferences in the academic world. The process of writing and editing academic research paper on the basis of literature review and research work will be presented. Strategies and skills for oral presentations will be introduced, with a number of examples to illustrate how to start, organize, conclude and deliver a speech most effectively. Cooperation in academics will be manifested and highlighted all through the course. The coursework will include writing and editing exercises, discussions on ethics and writing styles and techniques, evaluation of information resources, a group research paper, and group oral presentations based on the research paper, etc.



## **20 Regulations over IPR Licensing - A Comparative Perspective Between Chinese Antimonopoly Law and Korean Competition Law**

This course aims to provide understanding of the 7-year development of the Chinese Anti-monopoly Law enforcement, and the 35-year development of Korean competition law enforcement, based on a comparative legal approach. It will also include a discussion of various economic policy issues while concentrating on the contribution of competition policy to economic development and its relationship with industrial policy design. Fundamental perspective is that design and enforcement of competition policy should be fashioned to match each economy's developmental stage to accomplish maximum performance. Chinese or Korean precedents will be used to support the proposition.

Emphasis will be placed on current global issues of regulations over IPR licensing. The leading role China's and Korea's legal community plays in IPR issues as well as the enormous speed and volume of Chinese industry and technology will be considered for an up-to-date analysis of the topic.

Participants are expected to build intuition and perspective regarding effective enforcement of competition laws in the context of the fast developing economy of China. Skills to analyze legal cases and make persuasive conclusions will be also dealt with.

## **21 China and U.S. Comparative Environmental Law and Governance**

As the 21st century began, pundits debated whether, like the 20th, it would also be "America's century," whether China's remarkable economic rise would make it "China's century," or, perhaps, one seeing the development of "Chimerica." At the same time, it was also said that environmental limits to development will be the primary shaper of countries and their fortunes—with China (and India), with huge population and rapid development, and the U.S., with high per capita consumption, as keys to the future of the planet. This course will study China's environmental challenges and governance (including law) in the context of America's own environmental challenges and governance (including law) system, and in the context of the challenges to the two countries as the primary sources of the world's greenhouse gas emissions. We will consider how developments may shape business, government, and culture, and the ways in which China and America may learn from one another.

## **22 Global Administrative Law & Regulatory Policy**

This course will examine the emerging field of global administrative law and how it is influencing regulatory policy throughout the world. It will consider innovative new institutions that are developing to coordinate regulatory policy between countries and growing interactions between civil society and government regulators. The course will explore these topics by comparing environmental, health, safety, and financial regulation in several countries and at the international level.

## **23 International Politics**

This course has three distinct parts. The first part introduces students to the theories of International Relations. The second part focuses on a case study of U.S. Foreign policy since the Second World War. The third part discusses the issues before the global community such as the environmental degradation, global hunger, reducing poverty in the developing nations, the evolving nature of international economic system, and the global challenges before international law and the United Nations.

The method of teaching the course would be utilizing power point lecture format as well as employing a Socratic dialogue, and probing questions to get students engaged in active learning.

## **24 Spanish Culture - Based on History and Arts**

Courses in history, art and culture of Spain. Based on the history and the tools of art and literature it will be creating an explanatory body that helps the student to have an accurate idea not only of Spanish culture, but also their main moments, discuss about them and make a relation of them to the environment?

Through this course the students will have an overview of Spanish culture based on the contextualization of its history and using the art, literature, and traditions to understand the Spanish culture. The final objective is that the student will be able to recognize the different historical periods and relate them to their art, and also understand the basis of Spanish culture through the art and the history.

## 25 Rousseau and His Thought

This course will be an overall introductory lecture on the relations between Jean-Jacques Rousseau, tradition, and modernity. In addition to a general view on his life and work as a philosopher in Eighteenth-Century France, its aim is to provide students of the SJTU with unprecedented information on Rousseau's sources, readings, intellectual evolution and legacy; his major and minor works, with a focus on his less known although vital scientific works, the latest findings in his interpretation, the vast critical literature gravitating around him, and the distinctive features of French sensibility in the Enlightenment, which lead to Modernity.

## 26 Ecological Criticism Today

Ecological criticism in the humanities emerged in the USA during the 1960s and 1970s. This field has become more interdisciplinary, transnational, and theoretical. This course will focus on recent works the approach ecological problems through culture and theory.

## 27 Modern Ethics

The purpose of the seminar is to provide an overview of current issues in ethics. The students will be confronted with various opinions and speeches from philosophers, scientists, key actors and stakeholders in different fields of human activities such as genetics, economy and environmental sciences, political studies, among others.

We will learn to observe the new questions' meanings, the value of the arguments, and the solidity of the conclusions. A key requirement is to develop an open understanding of modernity and to consider what we owe to traditions. The question is the confrontation of the ideal of humanism and spirituality with a realistic view on human needs, on the state of knowledge, on human rights and duties.

The seminar will run over four weeks in July 2015 with three encounters of 1.30 h every week. Each week will be dedicated to one of the four fields chosen as described below. A text by an intellectual or a scientist will be studied each week. The main issues of the text will be explored at each meeting by the teacher to introduce a free discussion with the students.

WEEK 1: Ethics of business and sustainable economy

WEEK 2: Genetics and trans-humanism, personalized medicine

WEEK 3: Democracy and spirituality

WEEK 4: Culture and modernity: ethical pathways

## 28 The United States in a Global Perspective

The course will focus on main themes in American foreign policy, as well as immigration, and the causes of American military conflicts, including The Mexican War, the Spanish American War, and World Wars I and II, the Korean War, the Vietnam War and more recent engagements in the Middle East. The aim of the course is for students to understand the nature of the involvement of the United States in the global arena.



## 29 The United States in a Global Perspective

Description of China's History and Culture

"China's History and Culture" is an English course for overseas exchange students. It is also designed for Chinese undergraduate students. The course will introduce, analyze and explore the history of China, tracing China's history and culture from Neolithic times to the present. During the introduction of the whole development of China's history, the course will examine centuries of warfare and politics, science and technology, economics and commerce, as well as religion, philosophy, and the arts. The main goal of the course is to illuminate the psychology of the people and the society they created.

After completing this course, students will:

- 1) Have gained a holistic understanding of China's history.
- 2) Understand the formation, development, changes of Chinese culture.
- 3) Have a basic knowledge about China's warfare and politics, science and technology, economics and commerce, religion, philosophy, and the arts.
- 4) Understand the underlying psychology of Chinese people and Chinese society.

Based on the history knowledge, use a comparative view to examine crucial social and cultural differences between their own countries and China.

### **30 Nobel Prize Winners**

Based on her co-editing of the first book-length multi-author volume in English of the Chinese 2012 Nobel Prize in Literature laureate Mo Yan and her research on the U.S. 1962 Nobel Prize in Literature laureate John Steinbeck, at the Steinbeck Special Collections, housed at Stanford University, where she earned her Ph.D., Professor Duran will discuss the global, national, and aesthetic significance of the Nobel Prizes in Literature, Chemistry, Economics, Medicine, Peace, and Physics, so that students can understand how the these laureates are read and considered both inside and outside of their homelands. By reading one novel and one short story by both laureates, students will see how their works represent social changes, sorrows, and hope. All these topics are vital for helping future global leaders in all fields to appreciate how cultural communication and miscommunications occur.

### **31 Western Myths, Western Values**

Often the best way to know the present is to understand the past. This course is a study of myths from the ancient Mesopotamia, Greece, and Rome, dating from roughly 1000 to 100 BCE. Along with learning specific myths and their place in ancient society, we will also examine how deeply modern Western habits of thinking — about such things as nature, divinity, heroism, self, society, power, sexuality, gender, work, death — were first shaped by ancient myths and still continue to be influenced by them.

### **32 Sleeping Beauties Awake: Language Revival, Cross-Fertilization and Social Wellbeing**

This fascinating and multifaceted course will analyze the moral, ethical, aesthetic, epistemological, cognitive, psychological and economic benefits of language diversity. With coca-colonization and homogenization there will be more and more groups added to the forlorn club of the lost-heritage peoples. Language revival, the most extreme case of language learning, will become increasingly relevant as people seek to recover their cultural autonomy, empower their spiritual and intellectual sovereignty, and improve their wellbeing and mental health. There is an urgent need to offer perspicacious comparative insights, for example from the Hebrew revival, which is so far the most successful known linguistic reclamation.

The course will introduce students to Revivalistics, a new, cutting-edge trans-disciplinary field of enquiry. It will explore current attempts to reclaim Australian Aboriginal languages such as Barngarla. It will provide examples from many other languages such as Maori (New Zealand), Hawai'i (USA) and Sanskrit (India).

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