

#### "Jiao Tong Global Virtual Classroom" Initiative

#### Fall 2022 "Shared Courses"



#### 1. Introduction

"Jiao<sup>o</sup>Tong Global Virtual Classroom (Jiao<sup>o</sup>Tong GVC)" Initiative encourages Shanghai Jiao Tong University (SJTU) faculty to co-create collaborative online international learning courses with peers at universities around the world. Virtual exchanges foster valuable, sustainable, and accessible international experiences for all SJTU students. SJTU faculty and their international partners jointly build or share undergraduate or graduate courses.

Jiao Tong GVC courses are delivered either synchronously or asynchronously. Students will be able to gain global perspectives and deepen their understanding of the subject matter and cross-culture through engaging in the global virtual classroom. This is where the planned program comes in: Page 1 of 39



Universities share quality teaching resources, that students from different regions and cultural backgrounds have golden opportunities to exchange ideas and inspire each other in the same class.

#### 2. Academic Courses

- Courses taught in English, covering both undergraduate and graduate levels
- Covering all disciplines: Science, Engineering, Agriculture, Medicine, Humanities and Social Sciences
- **SJTU Transcript**: The academic transcript will be sent to students' home university directly.
- Cost: These courses are offered to students of partner universities at no cost.

#### 3. Practice of Fall 2021

In the years of 2021 and 2022, **43 "Shared Courses" and "Co-built Courses"** of "Jiao<sup>o</sup>Tong GVC" have been provided for partner universities and the Association of Pacific Rim Universities (APRU), which attracted **more than 360 students** from **27 universities of 14 countries/regions** in **Asia**, **Europe**, **Oceania**, **North America and South America**.

#### 4. Eligibility & Requirement



To be recommended for participating in virtual exchange, applicants must meet

all requirements below:

- Applicants must be enrolled at their home university during Fall 2022 semester.
- English language proficiency requirements

IELTS 6.0, TOFEL 90, or other certificate showing the equivalent competency

of English (waived for English native speakers)

• Others

Applicants should meet the requirements of home intuition for virtual exchange.

\* Important Note:

"Jiao<sup>o</sup>Tong GVC" program only open to virtual exchange students. For Normal Exchange students, please refer to <u>Study@SJTU</u>.

#### 5. Application for Shared Courses

#### Before Applying

Please check if there are any pre-requisites or special requirements before applying for the course(s).

#### **Time for Application**

Deadline: Friday, August 26, 2022

Application Procedures



- a. To select **no more than 3 courses** from the course list of Fall 2022
- b. To download the **application form** and submit to applicant's home university
- c. SJTU coordinator to confirm with the applicant's home university whether the application is endorsed

#### 6. Contact Information

If any questions arise, please kindly contact Lina Tao, Program Coordinator

#### at nalitao0504@sjtu.edu.cn.

Now please visit the website of **Jiao**.**Tong GVC** to start your journey of virtual exchange at Shanghai Jiao Tong University (SJTU).



## Fall 2022 "Shared Courses"

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- Engineering, Sciences and Life Medical Sciences: Course 1-11
- Humanities and Social Sciences: Course 12-19

\* UG stands for courses open for undergraduate students only; Grad stands for courses open for graduate students only; **UG/Grad** stands for courses open for both.

#### Please find more details of "Shared Course" as follows.



## **Course 1: Fundamentals of Materials Science Part I**

## (UG/Grad)

| <b>MSE2605 Fundamentals of Materials Science Part I</b> |   |
|---|---|
| Number of Credits                                       | 3   |
| Offering School   | School of Materials Science & Engineering   |
| Course Instructor                                       | Qiang Guo   |
| Course Level  | Undergraduate and Graduate  |
| Language of Instruction                                 | English   |
| First Day of Class                                      | Monday, Sept. 12, 2022  |
| Last Day of Class                                       | Thursday, Dec. 1, 2022  |
| Course Component  | Lecture   |
| Mode of Teaching  | Synchronous<br>Course recordings available for students.  |
| Meeting Time  | <b>1-12 weeks: Mondays 14:00 p.m 15:40 p.m. +</b><br><b>Thursdays 16:00 p.m16:40 p.m.</b><br>Click here to view World Clock Meeting Planner |
| Time Zone   | Beijing Time (UTC+8)  |
| Restrictions  | For materials science & metallurgy students.<br>Prerequisites include calculus, college physics, and<br>thermodynamics.                     |



| Course Description                   | Materials are the physical foundations for the<br>development of science and technology. The human<br>civilizations are historically designated by the<br>evolution of materials, such as the Stone Age, the<br>Bronze Age and the Iron Age. Nowadays, materials<br>science and technology support most of the industrial<br>sectors, including aerospace, telecommunications,<br>transportation, architecture, infrastructure and so on.<br>Fundamentals of Materials Science is a core module for<br>undergraduates majored in materials science and<br>engineering.<br>An integrated approach of combining metallic, ceramic<br>and polymeric materials will be adopted in this course,<br>for the attendants to attain a deep understanding on the<br>correlation of composition, microstructure, processing<br>and properties in materials science. The first part of this<br>course (MSE2605) will cover atomic bonding, structure<br>of solids, defects, and mechanical properties of<br>materials. |
|--------------------------------------|--|
| Assessment Format                    | <ol> <li>Class participation and quizzes: 10%</li> <li>Problem sets: 10%</li> <li>Experiments (for offline students) / Mini research<br/>report (for online students): 20%</li> <li>Final exam: 60%</li> </ol>   |
| Syllabus                             | English  |
| Please visit the <b>page</b> for mor | e information on this course.  |



# Course 2: Materials Physics (UG/Grad)

| MT319 Materials Physics   |   |
|---|---|
| Number of Credits   | 4   |
| Offering School   | School of Materials Science and Engineering   |
| Course Instructor   | Tao Hang  |
| Course Level  | Undergraduate and Graduate  |
| Language of Instruction   | English   |
| First Day of Class  | Wednesday, Sept.14, 2022  |
| Last Day of Class   | Friday, Dec. 30, 2022   |
| Course Component  | Lecture   |
| Mode of Teaching  | Synchronous<br>Course recordings available for students.  |
| Meeting Time  | 1-16 weeks:<br>Wednesdays 10:00 a.m 11:40 a.m. + Fridays<br>08:00 a.m 09:40 a.m.<br><u>Click here to view World Clock Meeting Planner</u>   |
| Time Zone   | Beijing Time (UTC+8)  |
| Restrictions  | Prerequisites: Calculus, General Physics,<br>Thermal dynamics, Fundamentals of Materials<br>Science   |
| Course Description  | Basic principles of modern physics and quantum<br>mechanics as pertain to solid state physics and the<br>physical behavior of materials on the atomic scale.<br>Applications to solid state materials will be<br>emphasized on those topics including thermal<br>capacity, electric conductivity, and semiconductors. |
| Assessment Format   | <ol> <li>Lectures: 10%</li> <li>Homework: 20%</li> <li>Final Examination: 70%</li> </ol>  |
| Syllabus  | English   |
| Please visit the <b>page</b> for more information on this course. |   |



# Course 3: Digital Image Processing (UG/Grad)

| ICE6202 Digital Image Processing |   |
|----------------------------------|---|
| Number of Credits                | 3   |
| Offering School                  | School of Electronic Information and Electrical Engineering   |
| Course Instructor                | Rui Zhang   |
| Course Level                     | Senior Undergraduate and Graduate   |
| Language of Instruction          | English   |
| First Day of Class               | Tuesday, Sept. 20, 2022   |
| Last Day of Class                | Tuesday, Jan. 3, 2023   |
| Course Component                 | Lecture   |
| Mode of Teaching                 | Synchronous (Online + On-campus)<br>Course recordings available for students.   |
| Meeting Time                     | <b>2-17 weeks: Tuesdays, 12:55 p.m 15:40 p.m.</b><br>Click here to view World Clock Meeting Planner   |
| Time Zone                        | Beijing Time (UTC+8)  |
| Restrictions                     | Prerequisites:<br>Digital Signal Processing, Matrix Theory, Probability<br>Theory, Random Procedure   |
|                                  | This course is offered for senior undergraduates, master<br>students and Ph.D candidates. It introduces fundamental<br>principles and practical techniques of digital image<br>processing. The content of the course comprises of 3<br>parts. |
| Course Description               | Part one, fundamental principles, includes the theories of 2- D signal processing and visual psychology, results of information theory and image transforms.  |
|                                  | Part two, human visual system based practical<br>techniques, includes the principles and the methods of<br>image enhancement, image restoration, image<br>reconstruction and image compression.   |
|                                  | Part three, content recognition and understanding based<br>practical techniques, introduces image segmentation and<br>image description in the view of digital image<br>processing.   |



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|   | This course completely reflects the new progress of   |
|---|---|
|   | digital image processing, not only gives the research |
|   | hotspots, but also gives practical methods and        |
|   | techniques of this field.                             |
|   | 1. Practice exercise: 20%                             |
| Assessment Format   | 2. Project reports: 40%                               |
|   | 3. Final exam: 40%                                    |
| Syllabus  | English   |
| Please visit the <b>page</b> for more information on this course. |   |



# Course 4: Solid State Physics (Grad)

| VE/VM504 Solid State Physics         |   |
|--------------------------------------|---|
| Number of Credits                    | 3   |
| Offering Department                  | UM-SJTU Joint Institute                                   |
| <b>Course Instructor</b>             | Hua Bao   |
| Course Level                         | Graduate  |
| Language of Instruction              | English   |
| First Day of Class                   | September (TBA)   |
| Last Day of Class                    | December (TBA)  |
| Course Component                     | Lecture   |
| Mode of Teaching                     | Synchronous   |
|                                      | Course recordings available for students.                 |
| Meeting Time                         | 1-14 weeks: Mondays + Wednesdays 10:00 a.m                |
|                                      | 11:40 a.m.  |
|                                      | Click here to view World Clock Meeting Planner            |
| Time Zone                            | Beijing Time (UTC+8)                                      |
| Restrictions                         | General Physics (previous exposure to quantum             |
|                                      | mechanics is beneficial)                                  |
|                                      | This course serves as an introductory solid state physics |
|                                      | course for graduate students or seniors with an           |
| Course Description                   | engineering background to conduct research in the area    |
|                                      | of electronics, material science, optics, nanoscience and |
|                                      | technology.   |
|                                      | 1. In-class exercises: 25%                                |
| Assessment Format                    | 2. Homework: 20%  |
|                                      | 3. Course Project: 20%                                    |
|                                      | 4. Final: 35%   |
| Syllabus                             | English (2021 Version)                                    |
| Please visit the <b>page</b> for mor | re information on this course.                            |



# Course 5: Introduction to Solid Mechanics (UG)

| VM21                                 | 1 Introduction to Solid Mechanics  |
|--------------------------------------|--|
| Number of Credits                    | 4  |
| Offering School                      | UM-SJTU Joint Institute  |
| Course Instructor                    | Yanfeng Shen   |
| Course Level                         | Undergraduate  |
| Language of Instruction              | English  |
| First Day of Class                   | September (TBA)  |
| Last Day of Class                    | December (TBA)   |
| Course Component                     | Lecture  |
| Mode of Teaching                     | Synchronous  |
|                                      | Course recordings available for students.  |
| Meeting Time                         | ТВА  |
| Time Zone                            | Beijing Time (UTC+8)   |
| Restrictions                         | -  |
|                                      | Develop an understanding of the physical behavior of<br>materials under load. The course emphasizes<br>equilibrium, compatibility of deformation, and material<br>behavior. Weekly lectures are given on theory and<br>applications in statics, mechanics and structural |
| Course Description                   | engineering. Applications include axial loads, thermal<br>stresses, bending, shear, and torsion, combined loadings,<br>stress and strain transformations.  |
| Assessment Format                    | <ol> <li>Homework: 20%</li> <li>Exam 1: 15%</li> <li>Exam 2: 30%</li> <li>Final Exam: 35%</li> </ol>   |
| Syllabus                             | English  |
| Please visit the <b>page</b> for mor | e information on this course.  |



# Course 6: Quantum Information Technologies and A

## Practical Module (UG)

| MS331+MS333 Quantum Information Technologies and A Practical Module |   |
|---|---|
| Number of Credits   | 4   |
| Offering School   | School of Physics and Astronomy   |
| <b>Course Instructor</b>  | Prof. Xian-Min Jin and Dr. Hao Tang   |
| Course Level  | Undergraduate   |
| Language of Instruction   | English   |
| First Day of Class  | Wednesday, Sept. 14, 2022   |
| Last Day of Class   | Wednesday, Dec. 28, 2022  |
| <b>Course Component</b>   | Lecture   |
| Mode of Teaching  | Synchronous (Online + On-campus)<br>Course recordings available for students.   |
| Meeting Time  | <b>1-16 weeks: Wednesdays, 18:00 pm - 21:30 pm</b><br>Click here to view World Clock Meeting Planner  |
| Time Zone   | Beijing Time (UTC+8)  |
| Restrictions  | Second or Third year undergraduate with a background<br>on physics, mathematics, computer sciences or other<br>engineering subjects. Preliminary knowledge on<br>quantum mechanics is not a must. |



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| Course Description                   | <ul> <li>This course would cover the fundamental principles, algorithm designs and frontier progresses on quantum information and quantum computing, with an emphasis on the practical skills and visions for application-oriented quantum information technologies.</li> <li>Through this course, the students are expected to:</li> <li>ü Understand fundamental concepts for computational complexity, and the essential difference between classical and quantum computing;</li> <li>ü Learn different physical platforms for quantum computing including photonics, superconductors, ion traps, etc; Understand the physical realization and matrix expressions for qubits and quantum gates.</li> <li>ü Master common universal quantum algorithms including Deutsche's algorithm, Grover's algorithm, Shor's algorithm, Quantum Fourier transform, and know how to implement quantum circuits on the online quantum cloud platform to demonstrate these algorithms.</li> <li>ü Learn analog quantum algorithms such as boson sampling and quantum computing approaches including analog photonic quantum computing, Ising machine, and quantum annealer, etc.</li> <li>ü Know the hybrid quantum-classical algorithms such as the Noisy Intermediate-Scale Quantum technologies.</li> </ul> |
|--------------------------------------|--|
| Assessment Format                    | <ul><li>1.Class performance: 30%</li><li>2.Oral report: 20%</li><li>3.Final Exam: 25%</li><li>4.Report: 25%</li></ul>  |
| Syllabus                             | English  |
| Please visit the <b>page</b> for mor | re information on this course.   |



# Course 7: Scientific Writing, Integrity and Ethics (Grad)

| <b>GE6001 Scientific Writing, Integrity and Ethics</b> |  |
|--|--|
| Credits  | 1  |
| Offering School  | School of Biomedical Engineering   |
| Course Instructors                                     | <u>Shanbao Tong, Guanning Lin, Zongyuan</u><br><u>Cai, Guoyuan Yang</u>  |
| Course Level   | Graduate   |
| Language of Instruction                                | English  |
| Starting Date  | Thursday, Nov. 10, 2022  |
| Ending Date  | Thursday, Jan. 5, 2023   |
| Course Type  | Lecture  |
| Modes of Delivery                                      | Synchronous + Asynchronous<br>Course recordings will be available for students.  |
| Meeting time   | 9-17 weeks: Thursdays,14:00 p.m 15:40 p.m.<br>Click here to view World Clock Meeting Planner   |
| Time Zone  | Beijing Time (UTC+8)   |
| Restrictions   | -  |
| Course Description                                     | GE6001 is an introductory course targeting the graduate<br>students and senior undergraduates. The course is<br>aiming to introduce the basic rules and ethics in the<br>activities of scientific research and communications, and<br>establish the sense of fundamental ethics and integrity<br>for the future engineers or researchers. The eight lectures<br>are going to cover the topics on the most important rules<br>and ethics in scientific research including designing a<br>study, conducting experiments and collecting data,<br>analyzing the data, and writing the results as journal<br>papers or presenting in conferences. |
| Assessment Format                                      | <ol> <li>Attendance: 30%; skipping 3 or more lectures fails to<br/>get the course credit</li> <li>In-class quizzes: 70%</li> </ol>   |
| Syllabus   | English  |



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Please visit the **page** for more information on this course.



# Course 8: Finite Element Analysis of Composites

## (UG/Grad)

| <b>AE8104 Finite Element Analysis of Composites</b> |   |
|---|---|
| Number of Credits                                   | 3   |
| Offering School                                     | School of Aeronautics and Astronautics  |
| Course Instructor                                   | <u>Yile Hu</u>  |
| Course Level  | Senior Undergraduate and Graduate   |
| Language of Instruction                             | English   |
| First Day of Class                                  | Friday, Sept. 23, 2022  |
| Last Day of Class                                   | Friday, Jan. 6, 2023  |
| <b>Course Component</b>                             | Lecture   |
| Mode of Teaching                                    | Synchronous<br>Course recordings available for students.  |
| Meeting Time  | <b>2-17 Weeks: Fridays, 18:00 p.m 20:20 p.m.</b><br>Click here to view World Clock Meeting Planner  |
| Time Zone   | Beijing Time (UTC+8)  |
| Restrictions  | Prerequisites:<br>Student should have previous knowledge or currently<br>registered to courses: Solid Mechanics (AE8124),<br>Mechanics of Composites (AE8102), Linear Algebra,<br>and Numerical analysis. Moreover, this course requires<br>some programming knowledge with C/C++,<br>FORTRAN, Java, Python or any other computer<br>language you prefer. Matlab is not recommended for<br>graduate students. |



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| Course Description  | This course aims at providing fundamental and<br>practical notions in finite element analysis. The course<br>will present systematic approaches for the derivation of<br>various finite elements. The students will also be<br>introduced to numerical techniques for the solution of<br>the discretized governing equations. Practical aspects<br>such as mesh generation and choice related to<br>numerical integration will also be presented.<br>This course will mostly be based on structural analysis,<br>focusing on both isotropic and composite materials.<br>Students need to program their own FE code to<br>accomplish homework and final project. |
|---|---|
| Assessment Format   | <ol> <li>Homework: 30%</li> <li>In-class quizzes: 10%</li> <li>Mid-term exam: 30%</li> <li>Final Project: 30%</li> </ol>  |
| Syllabus  | English   |
| Please visit the <b>page</b> for more information on this course. |   |



# Course 9: Ocean Science (UG)

|                                      | SP166 Ocean Science                                      |  |
|--------------------------------------|--|--|
| Number of Credits                    | 2  |  |
| Offering School                      | School of Naval Architecture, Ocean and Civil            |  |
|                                      | Engineering  |  |
| Course Instructor                    | John Z. Shi  |  |
| Course Level                         | Undergraduate  |  |
| Language of Instruction              | English  |  |
| First Day of Class                   | Monday, 10-Oct-2022                                      |  |
| Last Day of Class                    | Monday, 26-Dec-2022                                      |  |
| Course Component                     | Lecture  |  |
| Mode of Teaching                     | Synchronous (Online + On-campus)                         |  |
|                                      | Course recordings available for students.                |  |
| Meeting Time                         | 5-16 weeks: Mondays, 12:55 p.m 15:40 p.m.                |  |
|                                      | Click here to view World Clock Meeting Planner           |  |
| Time Zone                            | Beijing Time (UTC+8)                                     |  |
| Restrictions                         | -  |  |
|                                      | To allow the young students to gain an oceanic           |  |
|                                      | perspective, i.e. being able to view things in terms of  |  |
|                                      | their importance or relationship to one another; an      |  |
|                                      | oceanic perspective lets you see this misnamed planet in |  |
| Course Description                   | a new light, and helps you plan for its future; you will |  |
|                                      | see that water, continents, seafloors, sunlight, storms, |  |
|                                      | seaweeds, and society are connected in subtle and        |  |
|                                      | beautiful ways.  |  |
|                                      | 1. Performance and Assigned Presentation: 25%            |  |
| Assessment Format                    | 2. Discussion: 25%                                       |  |
|                                      | 3. Review Essay Writing: 50%                             |  |
| Syllabus                             | English  |  |
| Please visit the <b>page</b> for mor | e information on this course.                            |  |



# **Course 10: Application of Viral Techniques and**

## Introduction to Molecular Virology

| <b>BIO8101</b> Application of Viral Techniques and Introduction to Molecular |   |
|--|---|
|  | Virology  |
| Number of Credits  | 2   |
| Offering School  | School of Life Sciences and Biotechnology   |
| Course Teacher   | <u>Ilya A. Vinnikov</u>   |
| Course Level   | Senior Undergraduate and Graduate   |
| Language of Instruction  | English   |
| First Day of Class   | Friday, Sept. 23, 2022  |
| Last Day of Class  | Friday, Jan. 6, 2023  |
| Course Component   | Lecture   |
| Mode of Teaching   | Synchronous (Online + On-campus)  |
|  | Course recordings available for students.   |
| Meeting Time   | 2-17 weeks: Fridays, 10:00 am - 11:40 am  |
|  | Click here to view World Clock Meeting Planner  |
| Time Zone  | Beijing Time (UTC+8)  |
| Restrictions   | The students should have basic knowledge in molecular   |
|  | biology and biochemistry.   |
|  | This course involves a comprehensive overview of  |
|  | replication, integration and transcription mechanisms of  |
|  | boin KNA- and DNA-containing viruses of   |
|  | intended for undergraduate or graduate students   |
|  | already familiar with basic molecular biology.  |
|  |   |
|  | The course will focus on regulatory molecular biology   |
| Course Description   | mechanisms in order to give the students a broad  |
|  | overview as well as aid them to understand deeper   |
|  | signaling pathway interactions, solve genetic problems  |
|  | and ideate their future projects. This course may meet the  |
|  | needs of advanced undergraduate students with interests   |
|  | in molecular biology and virology.  |
|  | At the same time, it may serve as a refresher course in   |
|  | molecular biology for graduate students willing to  |
|  | explore replication and transcription regulation from   |
|  | different often extreme angles which in viruses often go  |
| Course Description   | <ul> <li>both KNA- and DNA-containing viruses of</li> <li>prokaryotes and eukaryotes. It is therefore primarily</li> <li>intended for undergraduate or graduate students</li> <li>already familiar with basic molecular biology.</li> <li>The course will focus on regulatory molecular biology</li> <li>mechanisms in order to give the students a broad</li> <li>overview as well as aid them to understand deeper</li> <li>signaling pathway interactions, solve genetic problems</li> <li>and ideate their future projects. This course may meet the</li> <li>needs of advanced undergraduate students with interests</li> <li>in molecular biology and virology.</li> <li>At the same time, it may serve as a refresher course in</li> <li>molecular biology for graduate students willing to</li> <li>explore replication and transcription regulation from</li> <li>different, often extreme angles which in viruses often go</li> </ul> |



|   | beyond basic mechanisms. This is a typical lecture course |
|---|---|
|   | in which topics are narrated by the instructor.           |
|   | 1. Final exam (presentation + Q&A): 80%                   |
| Assessment Format   | 2. In-class work: 10%                                     |
|   | 3. Attendance: 10%  |
| Syllabus  | English   |
| Please visit the <b>page</b> for more information on this course. |   |



# Course 11: The Sustainable Development Goals of the

## United Nations (UG)

| ENVR8163 The Sustainable Development Goals of the United Nations |  |
|--|--|
| Number of Credits  | 2  |
| Offering School  | China-UK Low Carbon College  |
| <b>Course Instructor</b>   | Yuquan Zhang   |
| Course Level   | Graduate   |
| Language of Instruction  | English  |
| First Day of Class   | September (TBA)  |
| Last Day of Class  | December (TBA)   |
| <b>Course Component</b>  | Lecture  |
| Mode of Teaching   | Synchronous (Online + On-campus)<br>Course recordings available for students.  |
| Meeting Time   | ТВА  |
| Time Zone  | Beijing Time (UTC+8)   |
| Restrictions   | -  |
| Course Description   | Aiming to spread the knowledge of the Sustainable<br>Development Goals (SDG) of the United Nations and to<br>evoke the interest in international governance that<br>promotes exchanges between different cultural<br>backgrounds, this course provides the international<br>audience a China perspective on SDGs. For each SDG,<br>this course will introduce the basics, review the<br>development status of China's relevant work, elaborate<br>on case studies of China or other countries and regions,<br>and discuss the potential challenges.<br>The participants are expected to master the definitions of<br>SDGs, gain an understanding of China's work in the<br>arena of sustainable development, and develop analytical<br>skills under a multi-faceted SDG framework. Also, the<br>participants are encouraged to brainstorm solutions that |



|                                     | will help realize the SDGs with their own expertise. The<br>UN SDGs were adopted in 2015, consisting of 17 SDGs<br>that cover the societal, economic, and environmental<br>challenges. Specifically, the SDGs include 1) no poverty,<br>2) no hunger, 3) good health and well-being, 4) quality<br>education, 5) gender equality, 6) clean water and<br>sanitation, 7) affordable and clean energy, 8) decent<br>work and economic growth, 9) industry, innovation and<br>infrastructure, 10) reduced inequalities, 11) sustainable<br>cities and communities, 12) responsible consumption<br>and production, 13) climate action, 14) life below water,<br>15) life on land, 16) peace, justice and strong<br>institutions, and 17) partnerships for the goals. |
|-------------------------------------|---|
| Assessment Format                   | <ol> <li>Attendance: 10%</li> <li>Active participation in and contribution to classroom<br/>discussion: 30%</li> <li>A term paper in group effort (suggesting 3 members;<br/>length not exceeding 2000 words, the sum of figures and<br/>tables not exceeding 5): 60%</li> </ol>  |
| Syllabus                            | English   |
| Please visit the <b>page</b> for me | ore information on this course.   |



# Course 12: Introduction to Banking Industry in China

## (UG/Grad)

| <b>BUSS8030 Introduction to Banking Industry in China</b> |   |
|---|---|
| Number of Credits   | 1   |
| Offering School   | Antai College of Economics and Management   |
| Course Instructor   | Nan Li  |
| Course Level  | Senior Undergraduate and Graduate   |
| Language of Instruction                                   | English   |
| First Day of Class  | Thursday, Sept. 22, 2022  |
| Last Day of Class   | Thursday, Oct. 20, 2022   |
| Course Component  | Lecture   |
| Mode of Teaching  | Asynchronous ( <u>China MOOC</u> ) + Synchronous  |
| Meeting Time  | <b>2-6 Weeks: Thursdays, 18:00 p.m 20:40 p.m.</b><br>Click here to view World Clock Meeting Planner   |
| Time Zone   | Beijing Time (UTC+8)  |
| Restrictions  | Master in International Business or 3-4 year<br>undergraduate student. Students should have some<br>background in basic macroeconomics, microeconomics,<br>finance, algebra, differential calculus, statistics, and a<br>disposition to keep themselves informed of current<br>developments in the area of banking and finance in China<br>as well as in the world.   |
| Course Description  | This course builds on basic financial theory and the<br>principles courses in economics to address topics that are<br>important for managing banks in China. Upon successful<br>completion of the course, students are expected to<br>understand recent development in the Chinese banking<br>industry and how banking reforms change the banking<br>industry landscape in China. More importantly, students<br>are expected to understand the special role of financial<br>institutions in the Chinese economy and how to manage |



|   | the risks faced by the banks in China in a rapidly changing international environment.  |
|---|---|
| Assessment Format   | <ol> <li>Class Assignment: 50%</li> <li>Presentation: 20%</li> <li>Term Paper: 20%</li> <li>Class Participation: 10%</li> </ol> |
| Syllabus  | English   |
| Please visit the <b>page</b> for more information on this course. |   |



# Course 13: Advanced Econometrics-Time Series Analysis

## (UG/Grad)

| ECON9004 Advanced Econometrics-Time Series Analysis |   |
|---|---|
| Number of Credits                                   | 3   |
| Offering Department                                 | Antai College of Economics and Management   |
| <b>Course Instructor</b>                            | <u>Nan Li</u>   |
| Course Level  | Senior Undergraduate and Graduate   |
| Language of Instruction                             | English   |
| First Day of Class                                  | Friday, Sept. 16, 2022  |
| Last Day of Class                                   | Friday, Dec. 30, 2022   |
| <b>Course Component</b>                             | Lecture   |
| Mode of Teaching                                    | Synchronous (Online + On-campus)<br>Course recordings available for students.   |
| Meeting Time  | <b>1-16 weeks: Fridays, 14:00 p.m 16:45 p.m.</b><br>Click here to view World Clock Meeting Planner  |
| Time Zone   | Beijing Time (UTC+8)  |
| Restrictions  | Ph.D in finance, economics, and management; Master or<br>4year undergraduate student in finance, economics, and<br>management with strong background in math, finance,<br>and economics;<br>Prerequisite: finance, macroeconomics, microeconomics,<br>econometrics  |
| Course Description                                  | This course focuses on the advanced methods and tools<br>to analyze time series in finance and macroeconomics.<br>The first part of the course introduces the foundation and<br>building blocks for time series analysis, such as<br>stationarity, nonstationarity, cointegration, impulse<br>responses and shock identification etc.<br>The students are expected to understand ARMA, VAR,<br>and other models as well as methods such as Spectral<br>Analysis, GMM and Kalman Filter that are important |



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|   | tools in the time series analysis of macroeconomics and<br>financial economics. More importantly, students are<br>expected to be able to apply the methods and tools<br>learned to set up appropriate empirical models to analyze<br>the problem in macroeconomics and financial economics,<br>and to estimate and test these models. In the second part<br>of the course, various macro-asset pricing models are<br>introduced and the students are expected to understand<br>the empirical tests of implication of these asset pricing<br>model, both time-series and cross-section tests. |
|---|--|
| Assessment Format   | <ol> <li>Homework: 20%</li> <li>Presentation and Referee Report: 30%</li> <li>Class Participation: 10%</li> <li>Final Exam: 40%</li> </ol>   |
| Syllabus  | English  |
| Please visit the <b>page</b> for more information on this course. |  |



# Course 14: Academic Communications in English: Writing

## and Presentation (UG)

| EN908 Academic Communications in English: Writing and Presentation |  |
|--|--|
| Number of Credits  | 2  |
| Offering School  | School of Foreign Languages  |
| <b>Course Instructor</b>   | <u>Li Zhang</u>  |
| Course Level   | Undergraduate  |
| Language of Instruction  | English  |
| First Day of Class   | Thursday, Sept.15, 2022  |
| Last Day of Class  | Thursday, Dec. 29, 2022  |
| <b>Course Component</b>  | Lecture  |
| Mode of Teaching   | Synchronous (Online + On-campus)<br>Course recordings available for students.  |
| Meeting Time   | <b>1-16 weeks: Thursdays, 16:00 p.m 17:40 p.m.</b><br>Click here to view World Clock Meeting Planner   |
| Time Zone  | Beijing Time (UTC+8)   |
| Restrictions   | Students should have intermediate level of English and<br>above. There is no limitation to the majors and years of<br>undergraduate studies.<br>Students are able to write in English and want to improve<br>academic writing and presentation ability.  |
| Course Description   | Academic communications in English : Writing and<br>presentation is a course focusing on task-based academic<br>writing and oral presentation. The course is designed for<br>developing students' skills of researching in their<br>academic discipline, and skills of academic writing and<br>presentation. Students are required to collaborate and<br>finish series of tasks for a research project and present<br>their work to the class. The course is designed to provide<br>students with the methods to plan, research, organize,<br>write, edit, and evaluate various forms of academic<br>writing. It is also intended for improving their ability of |

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|---|--|--|
|   | presentation for seminars and conferences in the academic<br>world.<br>The process of writing and editing academic research<br>paper on the basis of literature review and research work<br>will be presented. Strategies and skills for oral<br>presentations will be introduced, with a number of<br>examples to illustrate how to start, organize, conclude and<br>deliver a speech most effectively. Cooperation in<br>academics will be manifested and highlighted all through<br>the course. The coursework will include discussions on<br>ethics and writing styles and techniques, evaluation of<br>information resources, a group research paper, and group<br>oral presentations based on the research paper, etc. |  |
| Assessment Format   | <ol> <li>Final: Research paper 40%</li> <li>Mid: Presentation 20%</li> <li>Process: 40%         <ul> <li>Participation and performance in class 10%</li> <li>SPOC learning 10% (50% videos and exercise+ discussion)</li> <li>Tasks in the process 20%</li> </ul> </li> </ol>  |  |
| Syllabus  | English  |  |
| Please visit the <b>page</b> for more information on this course.         |  |  |



# Course 15: Cutting Edge Issues in Comparative Literature

## Studies (Grad)

| CHN8701 Cutting Edge Issues in Comparative Literature Studies |  |
|---|--|
| Number of Credits   | 2  |
| Offering School   | School of Humanities   |
| <b>Course Instructor</b>                                      | Ning Wang  |
| Course Level  | Graduate   |
| Language of Instruction                                       | English  |
| First Day of Class  | September (TBA)  |
| Last Day of Class   | December (TBA)   |
| <b>Course Component</b>                                       | Lecture  |
| Mode of Teaching  | Synchronous (Online + On-campus)<br>Course recordings available for students.  |
| Meeting Time  | ТВА  |
| Time Zone   | Beijing Time (UTC+8)   |
| Restrictions  | The exam is divided into two parts: class presentation<br>and participation in discussions; an essay of either 3000<br>words in English or 8000 Chinese characters, which<br>could be recommended for publication if well written.   |
| Course Description  | The present course is a high-leveled lecture course<br>exclusively for graduate students of comparative and<br>world literature and its relevant areas. It is aimed to<br>enable students, through attending lectures and class<br>discussions, have a grasp of the cutting edge theoretical<br>topics in international comparative literature and express<br>their original ideas.<br>It will also enable students to do comparative literature<br>studies with its major methodologies and write academic<br>papers. Those who will attend the course should have<br>taken courses on the introduction to comparative<br>literature and literary theory in Chinese, and have a<br>general picture of Western literature. |



| Assessment Format   | <ol> <li>Attendance: 10%</li> <li>Speech: 30%</li> <li>Essay: 50%</li> </ol> |
|---|--|
| Syllabus  | English (2021 Version)   |
| Please visit the <b>page</b> for more information on this course. |  |



# Course 16: The Linguistic Landscape of China (Grad)

| CHN6208 The Linguistic Landscape of China |   |
|---|---|
| Number of Credits                         | 3   |
| Offering School                           | School of Humanities  |
| <b>Course Instructor</b>                  | Matthias GERNER   |
| Course Level                              | Graduate  |
| Language of Instruction                   | English   |
| First Day of Class                        | Wednesday, Sept.13, 2022  |
| Last Day of Class                         | Wednesday, Dec. 28, 2022  |
| <b>Course Component</b>                   | Lecture   |
| Mode of Teaching                          | Synchronous<br>Course recordings available for students.  |
| Meeting Time                              | <b>1-16 weeks: Wednesdays, 18:00 p.m 20:20 p.m.</b><br>Click here to view World Clock Meeting Planner   |
| Time Zone                                 | Beijing Time (UTC+8)  |
| Restrictions                              | Basic knowledge of linguistic notions   |
| Course Description                        | This module presents an overview of the more than 600<br>languages spoken in China, including their sociolinguistic<br>settings and structural features in terms of sound,<br>morphology and syntax. Students acquire systematic<br>knowledge of the existing language families in China: the<br>Sinitic ("Chinese Dialects"), Altaic, Tibeto-Burman,<br>TaiKadai, Miao-Yao and Austronesian languages. They<br>get to understand the Chinese and Western definitions of<br>language and appreciate differences in language diversity<br>of both China and Europe. Students will comprehend the<br>events that shaped the linguistic landscape of Modern<br>China: the adoption of the speech of Beijing as lingua<br>franca in 1913 and the spread of this lingua franca due to<br>internal migration after the 1980s. |
| Assessment Format                         | <ol> <li>Attendance:10%</li> <li>Homework: 30%</li> <li>Final Exam: 60%</li> </ol>  |



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SyllabusEnglish (2021 Version)Please visit the page for more information on this course.

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## Course 17: Entrepreneurship, Corporate Governance and

## Shareholder Remedies in China (UG)

| LAW6419<br>Entrepreneurship, Corporate Governance and Shareholder Remedies in<br>China |   |
|--|---|
| Number of Credits  | 2   |
| Offering School  | KoGuan School of Law  |
| <b>Course Instructor</b>   | Wei Shen  |
| Course Level   | Graduate  |
| Language of Instruction  | English   |
| First Day of Class   | Thursday, Sept. 15, 2022  |
| Last Day of Class  | Thursday, Nov. 24, 2022   |
| <b>Course Component</b>  | Lecture   |
| Mode of Teaching   | Asynchronous + Synchronous<br>MOOC: <u>https://www.icourse163.org/course/SJTU-</u><br><u>1003537004?tid=1461627474#/info</u><br>Course recordings available for students.   |
| Meeting Time   | <b>1-11 weeks: Thursdays, 18:00 p.m 20:20 p.m.</b><br>Click here to view World Clock Meeting Planner  |
| Time Zone  | Beijing Time (UTC+8)  |
| Restrictions   | Just a reminder, please do not take it for granted that<br>this is a practice or training course. Put the other way,<br>this is a core course on corporate law and corporate<br>governance theories.<br>Students needs to write an essay.   |
| Course Description   | This course aims to help students to correctly<br>appreciate the differences between various business<br>vehicles available in China and to comprehend the<br>rights and duties of different stakeholders in a<br>company. This course also aims to teach students<br>company law and regulations in China in a<br>comparative setting by reference to company law in |



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|                                       | other jurisdictions, in particular, common law<br>jurisdictions such as England, Hong Kong, and the<br>United States. Furthermore, this course will help<br>students to master the basic norms, doctrines and<br>principles in relation to companies, and to be able to<br>apply them to relevant issues in a more practical<br>manner.<br>Here are some topics this course may cover: business<br>vehicles and classification of companies; incorporation<br>and formation; corporate personality; promoters and<br>preincorporation contracts; corporate charter and<br>constitution; corporate governance; division of<br>corporate powers; fiduciary duties; protection of<br>minority shareholders; bankruptcy and restructuring;<br>corporate social responsibility.<br>This course may arrange small training sessions so that<br>students will have the opportunities to "practice"<br>company law in hypothetical corporate transactions. |
|---------------------------------------|--|
| Assessment Format                     | Essay:100%<br>Students needs to write an essay (7,000-8,000 words<br>including footnotes). <b>The due date is December 30,</b><br><b>2022.</b><br>Students need to do a presentation to introduce the<br>topics in the last class.   |
| Syllabus                              | English  |
| Please visit the <b>page</b> for more | re information on this course.   |



# Course 18: Chinese Foreign Trade Law (UG/Grad)

| LAW6828 Chinese Foreign Trade Law |  |
|-----------------------------------|--|
| Number of Credits                 | 2  |
| Offering School                   | KoGuan School of Law   |
| Course Instructor                 | JiaXiang Hu  |
| Course Level                      | Senior Undergraduate and Graduate  |
| Language of Instruction           | English  |
| First Day of Class                | Monday, Sept. 12, 2022   |
| Last Day of Class                 | Monday, Nov. 21, 2022  |
| <b>Course Component</b>           | Lecture  |
| Mode of Teaching                  | Synchronous (Online)<br>Course recordings available for students.  |
| Meeting Time                      | <b>1-11 weeks: Mondays, 18:00 p.m 20:20 p.m.</b><br>Click here to view World Clock Meeting Planner   |
| Time Zone                         | Beijing Time (UTC+8)   |
| Restrictions                      | Pre-requisites:<br>Public International law  |
| Course Description                | This course provides a focused treatment and analysis of<br>the major legal, policy and business aspects of foreign<br>trade in China. With respect to China's regulation of<br>foreign trade, areas covered include: trade in goods, trade<br>in services, protection of intellectual property rights in<br>trading, China's participation in the WTO and China's<br>commitments under the multilateral trading system, WTO<br>dispute settlement mechanism and the relevant disputes<br>concerning China. Specifically, China's regulations on<br>foreign trade include tariff regulation and non-tariff<br>regulation, trade remedies including antidumping<br>measures, countervailing measures, safeguard measures. |
| Assessment Format                 | <ol> <li>Classroom Performance: 20%</li> <li>Mid-semester Exam: 20%</li> <li>Final Exam: 60%</li> </ol>  |



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| Syllabus  | English |
|---|---------|
| Please visit the <b>page</b> for more information on this course. |         |



## **Course 19: Theory and Practice on Improving Immunity**

#### Based on Chinese Traditional Exercises (UG/Grad)

| PE008 Theory and Practice on Improving Immunity Based on Chinese<br>Traditional Exercises |  |
|---|--|
| Number of Credits   | 2  |
| Offering Department   | Department of Physical Education   |
| Course Instructors  | Huiru Wang, Feng Wang, Gang Xu, Tao Huang, Xiaoling<br>Yuan, Yong Zhao   |
| Course Level  | Undergraduate and Postgraduate   |
| Language of Instruction   | English  |
| First Day of Class  | Thursday, September 22, 2022   |
| Last Day of Class   | Thursday, December 29, 2022  |
| Course Component  | Lecture  |
| Mode of Teaching  | Asynchronous + Synchronous<br>Course recordings available for students.  |
| Meeting Time  | <b>2-16 Weeks: Thursdays, 14:00 p.m 15:40 p.m.</b><br>Click here to view World Clock Meeting Planner   |
| Time Zone   | Beijing Time (UTC+8)   |
| Restrictions  | A general understanding of traditional Chinese medicine and Indian Ayurveda.   |
| Course Description  | Exercise is medicine. Regular and moderate exercise can<br>effectively strengthen immune system so as to reduce the<br>risk of virus infection and also improve or assist in the<br>treatment of dysthymic disorders like anxiety and<br>depression. This course provides suggestions for the<br>general public about how to actively respond to the<br>outbreak of novel coronavirus. It also explains: how the<br>immune system reacts when viruses invade into the body;<br>why exercises can enhance immunity and what is the<br>mechanism; what the difference is between western sports<br>and traditional eastern exercises. Besides, the course<br>includes training lessons on Baduanjin, Zhanzhuang, |

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|   | Daoyin, Yoga and other exercises conducive to immunity<br>improvement.<br>This course is characteristic for its combination of physical<br>education and medicine, so the course will be taught by<br>experts in either sports or medicine. The teaching content<br>covers both disciplinary theory and specific training<br>method, showcasing the unique culture and charm of the<br>East while conducting cross-cultural communication as<br>well as sharing the wisdom of traditional exercises and<br>modern research and application in this regard. |
|---|--|
| Assessment Format   | <ol> <li>Theoretical part: 40% (Participation: 20% + Quizzes:<br/>60% + Final Exam: 20%)</li> <li>Practice: 60%</li> </ol>   |
| Syllabus  | English  |
| Please visit the <b>page</b> for more information on this course. |  |