

# MT018

工程材料与结构的力学行为

Mechanical Behavior of Engineering Materials and Structures

材料科学与工程学院 Yanyao Jiang

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

本课程是对工程材料和结构的力学行为进行通俗化介绍、讲解和分析。课程针对目前机械、航空、土木等行业中使用的众多工程材料和结构，对其力学行为进行介绍，重点介绍材料和结构在长时间服役、恶劣环境下的失效、破坏等行为。教学内容包括：材料的塑性变形、蠕变、失效等；结构承受往复载荷以及疲劳破坏；结构中的滚动接触问题；连接件中的螺栓耐久性；材料 and 结构的高温力学特性等。课程结合众多工程和研究实例，通俗易懂地介绍上述专业知识和理论。课堂教学中穿插师生互动，采用讨论、提问、演示等相结合的多样教学模式。目的是通过该课程的学习，使得上述专业的高低年级的本科生能够对材料和结构在实际应用过程中出现的失效、破坏、寿命等有基本的认识和理解，为学生今后进行材料安全设计及应用和深入研究奠定基础 and 提供思路借鉴。

## Course Description

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.

## 教学大纲

| 教学内容   | 学时 | 教学方式  | 作业及要求 | 基本要求 | 考查方式  |
|--|----|-------|-------|------|-------|
| Introduction of material deformation and failure | 3  | 讲授    |       | 了解   |       |
| Mechanical Testing                               | 3  | 讲授、讨论 |       | 理解   | 提问和讨论 |
| Stress-strain behavior                           | 3  | 讲授、讨论 |       | 理解   | 提问和讨论 |
| Static failure                                   | 3  | 讲授、讨论 |       | 理解   | 提问和讨论 |
| Fracture   | 3  | 讲授    |       | 了解   | 提问和讨论 |
| Fatigue  | 6  | 讲授、讨论 |       | 了解   | 提问和讨论 |

|                           |   |       |  |    |       |
|---------------------------|---|-------|--|----|-------|
| Rolling contact           | 3 | 讲授    |  | 了解 | 提问和讨论 |
| Durability of fasteners   | 3 | 讲授    |  | 了解 | 提问和讨论 |
| High temperature behavior | 3 | 讲授    |  | 了解 | 提问和讨论 |
| Conclusion                | 3 | 讲授、讨论 |  |    |       |

### 考核方式

(成绩构成) 课堂讨论提问+课程报告 Discussion + Report

### 参考资料

"Mechanical Behavior of Materials," 4th Ed., by Norman E. Dowling, Pearson, ISBN-13 978-0-13-139506-0

# PO024

可持续发展能源技术

Sustainable Energy Technologies

电子信息与电气工程学院 Patrick Chi Kwong LUK

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 1  |
| 授课语言 | 英语         | 学时 | 16 |

## 课程简介

气候变化、污染和能源短缺是人类今天面临的三个最大挑战。石油供应高峰已经过去，世界能源需求继续加速，从而创建了能源的可持续发展的危机。世界上大部分的能源来自化石燃料，其释放大量的二氧化碳到大气中，造成气候变化。能源和许多问题所需要的可持续性对新的科技解决方案提出了要求。

本课程旨在培养学生应对可持续性带来的挑战的意识，以及开发创新技术来应对这些挑战的能力。课程将系统与生动地讲授包括可再生能源和电气工程在内的系列科技领域知识。课程授课内容包括基础理论学习、视频辅助和相关的英国政府战略研究项目的案例研究。

## Course Description

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.

## 教学大纲

| 教学内容  | 学时 | 教学方式 | 作业及要求 | 基本要求 | 考查方式 |
|---|----|------|-------|------|------|
| Introduction to Energy Systems and Sustainability | 3  | 授课   |       |      |      |
| Electrical Power Engineering                      | 4  | 授课   |       |      |      |
| Renewable Energy                                  | 3  | 授课   |       |      |      |

|  |   |      |  |  |  |
|--|---|------|--|--|--|
| Advanced Electric Drives and Power Electronics | 3 | 授课   |  |  |  |
| Sustainable Design and Innovation              | 3 | 学生报告 |  |  |  |

### 考核方式

课程设计 Student will write an essay on sustainable design of a chosen topic.

### 参考资料

N/A

# LA020

## 知识产权反垄断规制——中韩发展之比较

Regulations over IPR Licensing - A Comparative Perspective  
between Chinese Antimonopoly Law and Korean Competition Law

凯原法学院 李煌

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|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

### 课程简介

随着近年来知识产权领域的反垄断案件日趋增多，该领域内的疑难问题也逐渐浮出水面。由于知识产权的无边界性，期间产生的很多法律问题已经成为世界反垄断执法机构所共同面临的难题。基于该背景，该课程主要从比较法的视角对比和探讨中国反垄断法生效以来六年的执法经验以及韩国竞争执法 35 年的执法实践。其主要目的在于让学生了解竞争政策在产业发展以及产业转型过程中的重要作用。而本课程的重心则是研究如何让竞争政策能够更好的促进知识产权的发展。在这些方面中国和韩国的一些案例都从不同的角度进行了回答。鉴此，本课程讲授的重点在于让学生能够了解世界范围内对于知识产权的监管政策，尤其是中国和韩国在这些方面所做的巨大努力。

通过该课的学习，我们希望学生能够了解反垄断执法的方法和原则。尤其是在快速发展的高科技行业适用反垄断法的时候，应当注意什么问题。我们会通过具体的案件来培养学生在该方面的实践操作能力。

### Course Description

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 of China. Skills to analyze legal cases and make persuasive conclusions will be also dealt with.

### 教学大纲

第一讲：反垄断法的背景知识（三个学时）

1、竞争政策简介：背景、目的和历史

- 2、中国和韩国的竞争执法机制
- 第二讲：竞争法（一）——理论和案例（三个学时）
  - 1、滥用市场支配地位
  - 2、不正当竞争操作与实践
- 第三讲：竞争法（二）——理论和案例（三个学时）
  - 1、垄断协议
  - 2、经营者集中
- 第四讲：竞争法中的豁免（一）（三个学时）
  - 1、中小企业保护，转包合同，专营合同，大型超市的不正当竞争行为
- 第五讲：竞争法中的豁免（二）和启示（三个学时）
  - 1、过度市场集中的限制行为
  - 2、消费者保护法
  - 3、中韩反垄断法的相关执法实践
- 第六讲：知识产权滥用行为（一）——总论（三个学时）
  - 1、介绍
  - 2、竞争政策、知识产权与经济发展
  - 3、相关法律法规
- 第七讲：知识产权滥用行为（二）——理论和实践（三个学时）
  - 1、知识产权滥用行为的分析框架
  - 2、重要案件分析
- 第八讲：知识产权滥用行为（三）——（三个学时）
  - 1、中韩知识产权反垄断监管之比较与分析
  - 2、课程总结

## 考核方式

本课程将采用多种形式的考核方式，其细目如下：

- 1、积极参与课堂讨论（30%）
- 2、有效完成课堂作业（20%）
- 3、撰写课程论文（50%）

## 参考资料

本课程将采用中文和英文两本教材。中文教材侧重于介绍中国反垄断法，而英文教材侧重于介绍韩国竞争法。

- 1、中文教材为——王先林著：《竞争法学》，中国人民大学出版社 2009 年版；
- 2、英文教材为——李焯著：Korean Competition Law and Policy in Development Context, 韩国发展组织 2015 年初出版。

# LA021

## 中美环境法与环境治理的比较

China and U.S. Comparative Environmental Law and Governance

凯原法学院 Dan Guttman

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|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

### 课程简介

随着二十一世纪的开始,权威人士在辩论是否像 20 世纪一样,它仍将是“美国的世纪”? 或者是中国显著的经济崛起将成为“中国的世纪”? 或者,也许会看到一个“中美共同体的发展”? 与此同时,环境的限制,庞大的人口和快速发展,与美国的人均高消费,将影响到这个星球的未来。

本课程将在美国自身的环境挑战和治理制度的背景下,研究中国的环境挑战和治理的挑战的背景下,两国作为全球温室气体排放的主要来源。我们会考虑的发展可能如何塑造企业,政府和文化,以及中国和美国以何种方式可以相互学习。

### Course Description

As the 21<sup>st</sup> century began, pundits debated whether, like the 20<sup>th</sup>, 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.

### 教学大纲

Session 1: Introduction: Translating Between Operating Systems

第一部分: 简介: “操作系统之间”的翻译

Session 2: China and U.S. (and global) Environmental Governance Challenges and Frameworks: Beginning the discussion

第二部分: 中国和美国(和全球)环境治理面临的挑战和框架: 开始讨论

Session 3: An introduction to the U.S. environmental law and governance system

第三部分: 介绍了美国环境法和治理体系

Session 4: Environmental public health; and introduction to environmental public health and to the relation between “law and science”

第四部分: 环境公众健康; 介绍了环境公众健康和之间的“法律与科学”的关系

Session 5: Movie: "A Civil Action"

第五部分：播放电影：“民事诉讼”

Session 6: From the bottom ---how citizens can and do use law to help to identify and solve environmental problems

第六部分：社会自下而上---公民如何可以用法律来帮助识别和解决环境问题

Session 7: China and America; some comparative environmental law and governance case studies

第七部分：中国和美国;一些比较环境法和治理的案例研究

Session 8: International environmental law and governance; China/US (and global) cooperation—what is the reality (ies) and what are the possibilities?

第八部分：会议的国际环境法和治理;中国/美国（及全球）合作，什么是现实性，什么是可能性？

Session 9: Last session-exam and wrapup

第九部分：最后会话考试，收卷

## 考核方式

由于将在课堂上进一步讨论，学生将参与课堂讨论，提供出自己的观察和经验（包括美国或其他国家在网上或在报纸上每天的阅读），并运用这些意见和经验。课堂讨论的主题就是期末考试或论文的内容。

As will be further discussed in class, students will be expected to participate in class, to contribute their own observations and experiences (including daily readings on the web or in the newspapers), the US or other countries), and to use these observations and experiences in class. The final exam or paper will be the subject of class discussion.

## 参考资料

N/A



# LA022

风险社会中全球行政法与行政规制管理政策

Global Administrative Law & Regulatory Policy

凯原法学院 Robert V. Percival

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

本课程将探讨全球行政法在世界行政法与政策的新兴领域，以及它是如何影响世界各国政府行政规制与管理政策的。目前这方面的制度创新的发展，使得国家和公民社会与政府监管部门之间的互动越来越多。该课程将在几个重要国家层面和国际层面对安全、健康、环境和金融监管进行比较来探讨这一话题。

## Course Description

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.

## 教学大纲

第一部分：什么行政规制监管是有必要的？

包括的主题有：“公地悲剧”，经济学中公共产品和外部性，公平 v. 效率的关注，不平等议价能力的经济理论。

Session 1: Is Regulation Necessary?

Topics to be covered: “Tragedy of the Commons,” economic theories of public goods and externalities, fairness v. efficiency concerns, unequal bargaining power.

第二部分：行政规制的选择

包括的主题：损害的责任，政府监管，强制保险，信息的选择，监管规制的灵活性 v. 复杂性等问题。

Session 2: Regulatory Options

Topics to be covered: liability for harm, government regulation, insurance requirements, informational alternatives, flexibility v. complexity in regulatory policy.

第三部分：行政监管规制政策的成本效益分析

包括的主题：人类生活的经济价值，扣除时间后的成本和收益，期权价值和现有价值。

Session 3: Cost-Benefit Analysis & Regulatory Policy

Topics to be covered: economic value of human life, discounting for costs and benefits that extend over time, accounting for option and existence values.

第四部分：行政规制所带来的“就业减少”，“拯救生命”，或者两者兼而有之？

包括的主题：战略行为问题的行政监管目标，技术强制规制监管，事前 V 事后的行政监管规制政策的影响分析。

#### Session 4: Is Regulation “Job-Killing,” “Life-Saving,” or Both?

Topics to be covered: the problem of strategic behavior by regulatory targets, technology-forcing regulation, ex-ante v. ex-post analyses of the impact of regulatory policy.

第五部分公民社会在行政规制与管理政策中的作用。

包括的主题：公众参与的发展和规制与管理政策的实施，行政透明度要求。

#### Session 5: The Role of Civil Society in Regulatory Policy

Topics to be covered: public participation in the development and implementation of regulatory policy, transparency requirements.

第六部分：全球行政法的出现

包括的主题：什么是“全球行政法”？如何让行政监管者加强全球规制监管政策的协调性，新的公共/私营伙伴关系是如何影响行政规制与管理的？以及如何才能追究其后果负责。

#### Session 6: The Emergence of Global Administrative Law

Topics to be covered: what is meant by “global administrative law,” how are regulators improving the coordination of global regulatory policy, how are new public/private partnerships influencing regulatory policy and how can they be held accountable for its consequences.

第七部分：强制行政规制与管理政策

包括的主题：行政规制与管理的“俘获”问题，自我监督和资格要求，进行系统审计和自我监管激励机制的问题。

#### Session 7: Enforcing Regulatory Policy

Topics to be covered: the problem of regulatory “capture,” self-monitoring and certification requirements, incentives for systematic auditing and self-policing.

第八部分：传统行政规制与管理的替代

包括的主题：基于市场和声誉机制，信息披露要求，负担转移和上市前的测试要求。

#### Session 8: Alternatives to Traditional Regulation

Topics to be covered: market-based and reputational mechanisms, information disclosure requirements, burden-shifting and pre-market testing requirements.

## 考核方式

N/A

## 参考资料

1. Robert V. Percival, Christopher H. Schroeder, Alan Miller & James P. Leape, *Environmental Regulation: Law, Science & Policy* (Wolters Kluwer 7<sup>th</sup> ed. 2013).
2. Lisa Heinzerling & Mark V. Tushnet, *The Regulatory and Administrative State: Materials, Cases, Comments* (Oxford Univ. Press 2006).
3. David Vogel, *The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States* (2012).
4. Jonathan B. Wiener, Michael D. Rogers, James K. Hammitt & Peter Sand, eds., *The Reality of Precaution: Comparing Risk Regulation in the United States and Europe* (Resources for the Future 2011).
5. Robert V. Percival & Zhao Huiyu, *The Role of Civil Society in Environmental Governance: A Comparative Study of China and the United States*, 24 *Duke Environmental Law & Policy*

Forum 141 (2014).

6. Robert V. Percival, *Risk, Uncertainty and Precaution: Lessons from the History of U.S. Environmental Law*, in *Trade, Health and the Environment: The European Union Put to the Test* (Marjolein van Asselt, Michelle Everson & Ellen Vos, eds. Routledge 2014).
7. W. Kip Viscusi, *Risk by Choice: Regulating Health and Safety in the Workplace* (1983).
8. Richard Stewart, *The Reformation of American Administrative Law*, 88 Harv. L. Rev. 1669 (1975).
9. Cass R. Sunstein, *Paradoxes of the Regulatory State*, 57 U. Chic. L. Rev. 407 (1990).
10. Frank Ackerman and Lisa Heinzerling, *Pricing the Priceless: Cost-Benefit Analysis of Environmental Regulation*, 150 U. Penn. L. Rev. 1333 (2002).

# PU089

国际政治

International Politics

国际与公共事务学院 Manochehr Dorraj

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

本课程由三部分构成。第一部分介绍国际关系理论，第二部分重点针对二战后美国的对外政策进行案例研究，第三部分讨论“地球村”面对的诸多问题与挑战。课程利用 PPT 进行教学的同时，会通过苏格拉底对话和深入的问题使学生积极参与主动学习。

## Course Description

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.

## 教学大纲

### Course Outline:

1. Introduction to International politics and the course
2. Components of Power in International Relations
3. Sources of War and Conflict in International Relations
4. Alternative Perspectives in the Study of World Politics
5. Foreign Policy Decision Making
6. Patterns of Militarization, the role of military and coercive diplomacy
7. Balance of Power, Arms Race, Arms Control and conflict Resolution: Realist vs the Liberal Institutional path to Peace
8. US Foreign Policy: A Case Study in Global Politics
9. Globalization and International Finance: Money and Markets in the Global Economy
10. International Political Economy, Multinational Corporations, International Trade and The North-South Divide and Dialogue
11. Toward a World Order: International Organizations, Intergovernmental and Nongovernmental organizations, the United Nations, International Law, Peace Keeping and Peace Making

12. Population Explosion, Food and Global Hunger, The Causes and the Consequences of Environmental Degradation
13. Global Change and the Future of World Politics
14. Origins and developments of the Cold War: An examination of U.S.

## 考核方式

### Evaluation, Tests, and Grading:

Your grade will be determined on the basis of your performance in two exams, a final, one book review and your class participation. Exams will cover both the reading assignments and the lecture notes. Exam questions are going to be objective and essay questions.

Your grade will be determined on the following basis:

Exam 1: 25%

Exam 2: 25%

Exam 3: 25%

Book Review 20%

Class participation 5%

Total 100%

## 参考资料

### Required Texts:

1. Kegley, Jr. & Blanton, World Politics: Trend and Transformation, (Wadsworth and Cengage, 2014).
2. Hook & Spanier, American Foreign Policy Since the World War two, Eighth Edition. (Congressional Quarterly, 2013)
3. Starobin, Five Roads to the Future: Power in the Next Global Age (Penguin, 2010) (For the Book Review).

# MT015

纳米技术与表面科学

机械与动力工程学院 吴永玲

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 1  |
| 授课语言 | 英语         | 学时 | 16 |

## 课程简介

本课程主要介绍了纳米材料的基本知识以及其在表面工程领域内的应用。主要内容包括：纳米材料的基本概念、结构性能和表征方法、制备技术、最新研究进展；表面功能涂层材料的形成与结合机理、相关合成技术及基本原理、材料的表面改性方面等。本课程突出表现纳米材料及表面科学的“综合、复合、交叉、系统”的特色，反映纳米材料以及纳米表面技术的最新进展，强调理论密切联系生产实际，让学生对当今比较热门的纳米材料及其表面应用发展趋势有一定的认识和了解，提高学生对纳米材料与表面科学的兴趣与认知水平。

## Course Description

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.

## 教学大纲

| 教学内容  | 学时 | 教学方式                                    | 作业及要求                                | 基本要求  | 考查方式         |
|---|----|---|--------------------------------------|---|--------------|
| 纳米技术与纳米材料概述<br>Overview of Nanotechnology and Nanomaterials | 4  | 课堂讲授<br>小组讨论<br>Teaching and discussion | 课后阅读<br>课后作业<br>Reading and homework | 掌握纳米技术概念<br>Grasp the concept of nanotechnology           | 课堂口试<br>讨论发言 |
| 纳米复合材料及其应用<br>Nanocomposites and Its applications           | 2  | 课堂讲授<br>小组讨论<br>Teaching and discussion | 课后阅读<br>课后作业<br>Reading and homework | 了解纳米复合材料及其应用<br>Learn nanocomposites and its applications | 课堂口试<br>讨论发言 |
| 等离子体技术<br>Plasma technology                                 | 2  | 课堂讲授<br>小组讨论<br>Teaching and discussion | 课后阅读<br>课后作业<br>Reading and homework | 了解等离子体技术<br>Learn plasma technology                       | 课堂口试<br>讨论发言 |
| 纳米功能涂层概述  | 2  | 课堂讲授                                    | 课后阅读                                 | 了解纳米功能涂层概   | 课堂口试         |

|  |   |   |                                      |  |              |
|--|---|---|--------------------------------------|--|--------------|
| Overview of nano-functional coatings   |   | 小组讨论<br>Teaching and discussion         | 课后作业<br>Reading and homework         | 述<br>Learn nano-functional coatings  | 讨论发言         |
| 纳米功能涂层制备及性能介绍<br>Preparation and properties introduction of nano-functional coatings | 2 | 课堂讲授<br>小组讨论<br>Teaching and discussion | 课后阅读<br>课后作业<br>Reading and homework | 了解纳米功能涂层制备及性能介绍<br>Learn preparation and properties introduction of nano-functional coatings | 课堂口试<br>讨论发言 |
| 表面修饰在生物学中的应用<br>Surface modification applications in biomedicine                     | 2 | 课堂讲授<br>小组讨论<br>Teaching and discussion | 课后阅读<br>课后作业<br>Reading and homework | 了解表面修饰在生物学中的应用<br>Learn surface modification applications in biomedicine                     | 课堂口试<br>讨论发言 |
| 亲水性光催化涂料<br>Hydrophilic photocatalytic coating                                       | 2 | 课堂讲授<br>小组讨论<br>Teaching and discussion | 课后阅读<br>课后作业<br>Reading and homework | 了解亲水性光催化涂料<br>Learn hydrophilic photocatalytic coating                                       | 课堂口试<br>讨论发言 |

## 考核方式

最终成绩由平时作业、课堂表现、小组大作业成绩组合而成。各部分所占比例如下：

1. 平时作业和上课参与程度：50%。Homework and performance in class: 50%。  
主要考核对知识点的掌握程度、批判性思维能力、口头及文字表达能力。
2. 小组大作业及报告讨论：50%。Group task and report discusses: 50%。  
主要考核发现问题、分析、解决问题、创造性工作、处理信息、口头及文字表达等方面的能力。

## 参考资料

1. Handbook of Research on Nanoscience, Nanotechnology, and Advanced Materials. Mohamed Bououdina and J. Paulo Davim (Authors), IGI Global Publisher, USA, 2014.
2. Nanostructure, Nanosystems, and Nanostructured Materials: Theory, Production, and Development. P. M. Sivakumar, Vladimir I. Kodolov, Gennady Efremovich Zaikov, A. K. Haghi (Editors), Apple Academic Press, Canada, 2013.
3. Fundamentals of Nanotechnology: Recent Advances. Shiva Hullavarad (Author), Mark Branchk (Editor), Birmingham: Koros Press, 2013.
4. 安德鲁斯. 纳米材料-纳米科学与技术大全-1-导读版, 科学出版社, 2012 年.
5. 王琛. 纳米科技创新方法研究-纳米科学与技术, 科学出版社, 2012 年.

# PO019

燃气轮机燃烧

Gas turbine combustion

机械与动力工程学院 Robert Cheng

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 1  |
| 授课语言 | 英语         | 学时 | 16 |

## 课程简介

稀薄预混燃烧是用于先进燃气轮机污染物排放控制的“干式低 NO<sub>x</sub>” (DLN) 燃烧技术的技术基础。该项低污染燃烧技术降低火焰燃烧温度的基本方法就是稀释过量空气。然而，稀释过量空气会降低燃烧稳定性。因此，对于高效、清洁燃气轮机的设计与发展来说，稀薄预混燃烧火焰的稳定方式极为重要。本课程将重点介绍燃气轮机火焰稳定方法的背景知识及其内在机理。学生将会了解与燃气轮机燃烧稳定机理相关的以下基本知识：湍流火焰传播、湍流燃烧速度、火焰内部湍流作用影响级燃烧不稳定问题。对于这些基本知识的理解正是燃气轮机湍流燃烧理论发展的基础。

## Course Description

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 is the foundation for the development of turbulent combustion theory.

## 教学大纲

| 教学内容  | 学时 | 教学方式             | 作业及要求                            | 基本要求                        | 考查方式              |
|---|----|------------------|----------------------------------|-----------------------------|-------------------|
| 贫预混燃烧技术在工程中的应用及主要技术挑战<br>The application and main technical challenges of lean premixed combustion in engineering | 1  | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 预混燃烧火焰与非预混燃烧火焰的对比<br>Contrast of Premixed and non-premixed combustion flame                                       | 2  | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |



|   |   |                  |                                  |                             |                   |
|---|---|------------------|----------------------------------|-----------------------------|-------------------|
| 燃气轮机中的燃烧稳定方式介绍<br>Introduction of stable combustion manner in gas turbine | 2 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 预混湍流燃烧理论<br>Premixed turbulent combustion theory                          | 2 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 湍流预混火焰模型的实验研究<br>Experimental study of turbulent premixed flame model     | 2 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 湍流火焰传播速度<br>Turbulent flame propagation speed                             | 2 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 火焰的扰动及振荡<br>Flame disturbance and oscillation                             | 2 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 火焰结构及燃烧速度模型<br>Flame structure and combustion velocity model              | 2 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |
| 燃料变化对燃气轮机燃烧室的影响<br>Impact of fuel changes in the gas turbine combustor    | 1 | 课堂讲学<br>lectures | 掌握课堂知识点<br>grasp knowledge point | 课后复习<br>After-school review | 课堂提问<br>questions |

### 考核方式

平时成绩 (30%) + 各阶段大作业成绩 (70%) class performance(30%) + project (70%)

### 参考资料

Lefebvre, Arthur H, Gas turbine combustion : alternative fuels and emissions, Taylor & Francis, 2010

# PO025

## 新能源系统 New Energy System

机械与动力工程学院 Yunho Hwang

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

### 课程简介

本课程面向全体本科生，增加及提升学生的新能源知识和应用的意识。通过学习了解世界新能源特别是可再生能源资源情况，掌握太阳能、风能、生物质能、海洋能及波浪能等可再生能源的特点，利用的基本原理，主要技术及发展趋势。以国际视野了解可再生能源在新兴产业中的地位及社会可持续发展的作用，介绍世界各国的可再生能源的有关政策及效果。为有意从事可再生能源工作的各专业学生预备基础知识。

通过对世界新能源资源技术及利用的基本原理的讲解和介绍,提高学生对新能源知识和技术的兴趣和意识,为将来有意进行新能源技术研究和开发的学生打造基础。

### Course Description

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

### 教学大纲

| 教学内容                                     | 学时 | 教学方式                                | 作业及要求 | 基本要求 | 考查方式           |
|--|----|-------------------------------------|-------|------|----------------|
| 能源概论<br>Energy Introduction              | 4  | 课堂<br>Lecture                       |       |      | 作业<br>Homework |
| 太阳能光伏利用<br>The use of solar photovoltaic | 4  | 课堂<br>&讨论<br>Lecture&<br>Discussion |       |      | 作业<br>Homework |
| 风能利用<br>Wind energy                      | 4  | 课堂<br>Lecture                       |       |      | 作业<br>Homework |
| 生物质能<br>Biomass                          | 4  | 课堂<br>Lecture                       |       |      | 随堂测验<br>Quiz   |

|  |   |                                     |  |  |                    |
|--|---|-------------------------------------|--|--|--------------------|
| 其他可再生能源利用技术<br>Other renewable energy technologies | 4 | 课堂<br>&讨论<br>Lecture                |  |  | 作业<br>Homework     |
| 燃料电池及电池储能<br>Fuel cell and battery energy storage  | 4 | 课堂<br>Lecture                       |  |  | 作业<br>Homework     |
| 核能发电<br>Nuclear Power Generation                   | 4 | 课堂<br>Lecture&<br>Discussion        |  |  | 作业<br>Homework     |
| 能量传输<br>能量储存<br>Energy transfer<br>Energy storage  | 2 | 课堂<br>&讨论<br>Lecture&<br>Discussion |  |  | 随堂测验<br>Quiz       |
| 多能互补<br>Pluripotent complementary                  | 2 | 课堂<br>&讨论<br>Lecture&<br>Discussion |  |  | 最终考核<br>Final test |

### 考核方式

成绩构成：报告 20% + 期末考试 50% + 作业 30%

### 参考资料

1. Fundamentals of Renewable Energy Processes, Aldo Vieira da Rosa, 2<sup>nd</sup> ed. Academic Press, 2009
2. 可再生能源概论左然，施明恒，王希麟主编，机械工业出版社，2007
3. 新能源与可再生能源概论，苏亚欣等编著，化学工业出版社，2006

# AM040

创新方法与实践

Innovation Method and Practice

机械与动力工程学院 沙永杰

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|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

教导学生学习创新的系统化方法，使学生具备

1. 发明性问题解决的能力
2. 应用性创新的能力
3. 创新的思维与意识

## Course Description

Introduce the systematic methods of innovation, train students for the followings:

1. The ability to creatively solve problem
2. Application creativity
3. Innovative thinking ways and consciousness

## 教学大纲

| 教学内容            | 学时 | 教学方式 | 作业及要求 | 基本要求 | 考查方式 |
|-----------------|----|------|-------|------|------|
| 1. TRIZ 原理与理论基础 | 2  |      |       |      |      |
| 2. 应用性创新之内涵与模式  | 2  |      |       |      |      |
| 3. 四十项发明原则与应用   | 4  |      |       |      |      |
| 4. 问题探索与发掘      | 2  |      |       |      |      |
| 5. 理想性法则        | 2  |      |       |      |      |
| 6. 资源应用         | 2  |      |       |      |      |
| 7. 知识/效应库       | 2  |      |       |      |      |
| 8. 系统之进化趋势      | 2  |      |       |      |      |
| 9. 矛盾问题         | 2  |      |       |      |      |
| 10. 矛盾矩阵之应用原理   | 2  |      |       |      |      |

|              |   |  |  |  |  |
|--------------|---|--|--|--|--|
| 11. 系统之功能分析  | 2 |  |  |  |  |
| 12. 裁剪法与专利回避 | 2 |  |  |  |  |
| 13. 心理惯性     | 2 |  |  |  |  |
| 14. 发明案例研讨   | 4 |  |  |  |  |

### 考核方式

课程评核:

1. 课堂讨论/报告
2. 作业
3. 期中报告
4. 期末实作
5. 测验

### 参考资料

教材: 使用自编讲义

参考书: TRIZ 入门与实践 2008

# PO021

## 制冷与热泵过程及系统

Refrigeration and Heat Pumping Processes and Systems

机械与动力工程学院 Trygve Eikevik

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

### 课程简介

此课程介绍家用及商业用途等不同种类的制冷系统运行原理及设计方法,包括小型家用及超市用机组,以及商用机组,以及液化天然气。内容包括制冷技术发展史,不同制冷系统的热力学性能及损失分析,工质物性及环保制冷剂,制冷系统部件工作原理及设计方法,以及制冷热泵系统应用的系统解决方案等。

### Course Description

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.

### 教学大纲

| 教学内容  | 学时 | 教学方式               | 作业及要求 | 基本要求 | 考查方式    |
|---|----|--------------------|-------|------|---------|
| Thermodynamical process analyses  | 4  | 课堂                 |       |      | 课堂讨论及作业 |
| Working fluids physical properties and environmental consequences                             | 4  | 课堂                 |       |      | 课堂讨论及作业 |
| Main components in heat pumping processes, as compressors, evaporators, condensers and valves | 16 | 课堂/分组作业            |       |      | 课堂讨论及作业 |
| Modes of operation for heat pumping processes and systems                                     | 12 | 学生分组作业、学生 PPT 分组汇报 |       |      | 课堂讨论    |

## 考核方式

课堂表现、课程作业成绩、分组测试成绩、考试成绩

## 参考资料

每次课程之前会提供英文 PDF 文件资料

# H1062

历史上西方科学文化的东传与影响

The Dissemination and Impacts of Western Science and Culture in China: A Historical Introduction

科学史与科学文化研究院 石云里

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

本课程讲授二十世纪中期之前西方科学传入并最终扎根中国、从而实现中国科学传统近代化的历史过程。它将首先讲述印度和阿拉伯天文学及其相关学科在隋唐和元明时期的先后传入与影响，然后集中讨论明末到清中期欧洲自然哲学、数学、天文学、物理学和地学知识的传入以及中国对它们的消化与吸收，分析该进程对中国社会与文化的广泛影响。最后，课程还将讨论鸦片战争后中国对西方科学的全面引进、由此导致近代科学事业在中国建制化的过程。课程还将介绍历史上为西方科学的传入做出重要贡献的相关人物，分析中西两大科学文化传统相遇时所产生的碰撞及其调适过程，探讨文化与社会政治因素对中国吸收西方科学的影响。课程的目的是为学生提供独特的视角，以帮助他们理解中西科学传统及其相关文化背景的异同，了解中国科学近代化的艰难过程。

## Course Description

The course is a story of how Western science was gradually introduced to China and eventually took root and thus modernized the science tradition in the country before the mid-20<sup>th</sup> century. It will begin with a narration of the introduction of astronomy and the related disciplines from India and the Arabic areas to the Sui-Tang and Yuan-Ming dynasties and the influences thus produced. Then, it will concentrate on the transmission of knowledge in natural philosophy, mathematics, astronomy, physics, and geosciences from Europe to China between the late Ming and mid Qing dynasties and the Chinese reception and assimilation of them, as well as their profound social and cultural impacts in the country. Finally, the course will discuss the whole-scale introduction of European science to China after the Opium War, which led to the institutionalization of the modern science in the country. The course will also talk about the main figures who made important contributions to the dissemination of Western science in China, analyze the collisions occurred in the encounter of the two major scientific and cultural traditions and the process of their accommodation, and discuss the influences of cultural and socio-political factors on the reception of Western science. The goal of the course is to provide the students with a special angle to comprehend the similarities and differences between the Chinese and Western traditions in science and their specific cultural contexts, as well as to understand the long and difficult process of scientific modernization in China.

## 教学大纲

|      |    |      |       |      |      |
|------|----|------|-------|------|------|
| 教学内容 | 学时 | 教学方式 | 作业及要求 | 基本要求 | 考查方式 |
|------|----|------|-------|------|------|



|                        |   |         |      |                                  |      |
|------------------------|---|---------|------|----------------------------------|------|
| 前奏：印度与阿拉伯科学的传入与影响      | 4 | 课堂讲授与讨论 | 课外阅读 | 了解印度和阿拉伯天文学与星占学的传入与影响            | 课堂考察 |
| 序幕：欧洲的扩张、明朝的危机与欧洲科学的东传 | 4 | 课堂讲授与讨论 | 课外阅读 | 了解欧洲科学东传的欧洲与明朝背景                 | 课堂考察 |
| 质料与型模：传教士对明朝历法改革的参与    | 4 | 课堂讲授与讨论 | 课外阅读 | 了解明末历法改革所面临的问题以及传教士所提供的解决方式      | 课堂考察 |
| 天学与儒学：中西自然哲学思想的碰撞与调和   | 4 | 课堂讲授与讨论 | 课外阅读 | 了解西方和儒家自然哲学思想的主要冲突点与调和方式         | 课堂考察 |
| 会通与超胜：民间学习西方科学的热潮      | 4 | 课堂讲授与讨论 | 课外阅读 | 了解民间天文学家及其在西学的消化吸收上的主要贡献         | 随堂测验 |
| 皇帝的科学：清朝对西方科学的采纳与利用    | 4 | 课堂讲授与讨论 | 课外阅读 | 了解清朝在采纳西学方面的努力以及康熙皇帝为此付出的努力及其局限性 | 课堂考察 |
| 西学与自强：晚清西方科学的再传入       | 4 | 课堂讲授与讨论 | 课外阅读 | 了解鸦片战争到洋务运动之间西方科学全面传入的主要过程与内容    | 课堂考察 |
| 尾声：近代科学在中国的建制          | 4 | 课堂讲授与讨论 | 课外阅读 | 了解甲午战争之后到民国初期近代科学在中国兴起的基本过程      | 课堂考察 |

## 考核方式

课堂表现（10%）+随堂测验（30%）+期末考试（60%）

## 参考资料

参考资料：相关论文和著作章节选编（自编），并向学生提供电子文本。

# LI004

诺贝尔文学奖获得者

Nobel Prize Winners

留学生发展中心 Angelica Duran

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 1  |
| 授课语言 | 英语         | 学时 | 16 |

## 课程简介

基于她是第一本讲述莫言的英文书籍《在诺奖和全球故事讲述者背景下的莫言》的合作作者之一，其次她对 Steinbeck 有过研究，在斯坦福大学的 Steinbeck 作品收集中心，在那儿她获得了博士学位。Duran 教授将讨论诺贝尔文学奖、化学奖、经济学奖、医学奖、和平奖、物理学奖的全球意义上、国家意义上、和美学意义上的重要性，以至于学生可以理解这些得主是怎样在国内外被解读的。通过阅读他们的一篇小说和一个短故事，学生们将会明白他们的作品是怎么样代表社会变化、痛苦和希望。所有的这些话题对于帮助未来各领域的全球领袖来欣赏文化的沟通与阻塞的产生有直观重要的作用。

## Course Description

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 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.

## 教学大纲

| 教学内容<br>Course content | 学时<br>hours | 教学方式<br>Format<br>(discussion, lectures)             | 作业及要求<br>(homework, reading or other requirements)  | 基本要求<br>(other basic expectations) | 考查方式<br>(assessment)     |
|------------------------|-------------|--|---|------------------------------------|--------------------------|
| Day 1                  | 4           | Primarily discussion with prepared reading<br>讨论阅读材料 | 1) Read the two novels and course reader materials, 2) group work on written assignment<br>1.阅读两本小说和课堂阅读材料 2.小组写作 | 100% attendance<br>务必出席            | In-class reading<br>课堂阅读 |

|       |   |  |  |  |  |
|-------|---|--|--|--|--|
| Day 2 | 4 | Primarily discussion with prepared reading and film viewing<br>讨论阅读材料 & 观看电影 | 1) Read the two novels and course reader materials, 2) group work on written assignment<br>1. 阅读两本小说和课堂阅读材料 2. 小组写作      | 100% attendance, in-class quiz<br>务必出席&课堂小测验 | Group written assignment, quiz, In-class reading<br>小组写作、测验以及课堂阅读                                |
| Day 3 | 4 | Primarily discussion with prepared reading and film viewing<br>讨论阅读材料 & 观看电影 | 1) Read the two novels and course reader materials, 2) group work on written assignment<br>1. 阅读两本小说和课堂阅读材料 2. 小组写作      | 100% attendance, in-class quiz<br>务必出席&课堂小测验 | Group written assignment, quiz, In-class reading<br>小组写作、测验以及课堂阅读                                |
| Day 4 | 4 | Primarily discussion with prepared reading<br>讨论阅读材料 并观看电影                   | 1) Read the two novels and course reader materials, 2) individual work on written assignment<br>1. 阅读两本小说和课堂阅读材料 2. 小组写作 | 100% attendance, in-class quiz<br>务必出席&课堂小测验 | Group written assignment, quiz, In-class reading, individual written assignment<br>小组写作、测验以及课堂阅读 |

## 考核方式

(成绩构成-list grade distributions here) 30 pts.: Quizzes. 10 pts. each.

45 pts.: Group reports. 15 pts. each.

15 pts.: Individual essay

10 pts.: In-class oral readings and mini-assignments

30 分: 小测, 每次 10 分 (共 3 次)

45 分: 小组报告, 15 分每次

15 分: 个人论文

10 分: 课堂口头阅读和小任务

## 参考资料

1. Mo Yan's *Red Sorghum*, ISBN# 978-0140168549 莫言的《红高粱》
2. John Steinbeck's *The Pearl*, ISBN# 9780140177374 John Steinbeck 的《珍珠》
3. Materials in Course Reader, a binder of copies that Professor Duran can email to SJTU  
课程读物中的材料, Durante 教授将会发 Email 通知

# CL019

西方神话和西方价值观

Western Myths, Western Values

留学生发展中心 Keith Dickson

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 1  |
| 授课语言 | 英语         | 学时 | 16 |

## 课程简介

了解当下莫过熟知过去。这门课可追溯到公元前约 1000 年到 100 年。它是关于古代美索不达米亚，希腊，罗马地区神话的研究。在学习具体神话及其在古代地位的同时，我们将对现代西方行为和思维习惯进行探究，比如自然，神学，英雄主义，自我，社会，权利，性欲，性别，事业以及死亡等。了解它们是如何产生并至今仍受其影响。

## Course Description

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.

## 教学大纲

| 教学内容<br>Course content         | 学时<br>hours | 教学方式<br>Format (discussion, lectures) | 作业及要求<br>(homework,<br>reading or other<br>requirements) | 考查方式<br>(assessment) |
|--------------------------------|-------------|---------------------------------------|--|----------------------|
| Definition of Myths<br>神话的定义   | 1           | lecture & discussion<br>授课&课堂讨论       | Reading 阅读   |                      |
| Creation Myths 神<br>话的创作       | 1           | lecture & discussion<br>授课&课堂讨论       | reading 阅读   |                      |
| Human Creation 人<br>类创作        | 1           | lecture & discussion<br>授课&课堂讨论       | reading 阅读   |                      |
| Origin of Evil 罪恶起<br>源        | 1           | lecture & discussion<br>授课&课堂讨论       | reading 阅读   | Quiz 1<br>小测验 1      |
| Myths of Gender 性<br>别神话       | 1           | lecture & discussion<br>授课&课堂讨论       | Reading 阅读   |                      |
| Myths of "Other" 关<br>于“其它”的神话 | 1           | lecture & discussion<br>授课&课堂讨论       | reading 阅读   |                      |
| Death 死亡                       | 1           | lecture & discussion<br>授课&课堂讨论       | reading 阅读   | Quiz 2<br>小测验 2      |

|               |   |                                 |  |  |
|---------------|---|---------------------------------|--|--|
| Gods 神        | 5 | lecture & discussion<br>授课&课堂讨论 | reading 阅读                                 |  |
| Heroes 英雄     | 3 | lecture & discussion<br>授课&课堂讨论 | reading 阅读                                 |  |
| Conclusion 总结 | 1 | group presentations<br>授课&课堂讨论  | 10-minute<br>presentations<br>10 分钟 PPT 展示 |  |

## 考核方式

1. Attendance and Participation in daily Question-and-Answer and Discussion (25%)
  2. Two brief Short-Answer Quizzes based on knowledge of characters and myths (25% + 25% = 50%)
  3. Ten-Minute Group Presentations (25%).  
Each group will choose one fundamental Western attitude (towards individualism, society, nature, gender, work, etc.) and show how it is exemplified by at least one ancient myth.
1. 出勤&课堂发言及讨论 (25%)
  2. 两份小测试, 内容涉及人物和神话知识。(25% + 25% = 50%)
  3. 10 分钟小组陈述(25%).  
每个小组选择一个基本的西方价值观(如个人主义、社会、自然、性别、事业等) 并请至少举出一例阐述它是如何象征着西方神话。

## 参考资料

1. Online edition of Berens, E. 2007. Myths and Legends of Ancient Greece and Rome. (中文书名《古希腊和罗马的神话传说》)Maynard, Merrell & Company. (在线免费浏览网址 : <http://www.gutenberg.org/files/22381/22381-h/22381-h.htm>)
2. Short (1-2 page) online readings and charts from instructor's website. 1-2 页的网络阅读和导师网页上的章节
3. Collection of ancient images of myths from instructor's website (导师的古神话图片库地址) : <http://web.ics.purdue.edu/~kdickson/imgr.html>

# CL020

苏醒的睡美人：

语言的复兴及相互融合与社会福祉

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

留学生发展中心 Ghil'ad Zuckermann

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 1  |
| 授课语言 | 英语         | 学时 | 16 |

## 课程简介

这门引人入胜、多层面的课程会分析语言的多样性在道德伦理上、美学上、认知上、精神上及经济利益上的正面作用。在文化殖民和文化均化作用下，越来越多的少数群体失去了他们的语言文化遗产。语言复兴，作为一个语言学习中最极端的方向，对于人们寻求文化自治，增强他们的精神和理性，提高生活质量和心理健康有着越来越重要的作用。提供睿智的比较分析并帮助语言重铸，最知名的成功例子就是希伯来语的复兴。

这门课会给学生们介绍一个新兴的，前沿的交叉学科 – 复兴语言学。我们会探索目前对澳大利 Barngarla 土著正在进行的尝试

通过对这门课程的学习，学生将学习批判思考的特点和给出独立想法。这门课程提供给他们一个黑格尔的(实际上是费希特的)论点对照综合辩证法，这可以解释例如音乐或语言理论的发展。本课程将使用‘一方面’ – ‘另一方面’ (犹太式的) 的思维方式，而不是一个非黑即白，只关心对错的心态。它将展示出一种二分法导致的跨文化沟通不畅，例如人们常常对英式英语产生误会，因为其字面含义与实际表述意义相反。该课程还将讨论跨学科的方法的优点，即产生一个新的、混合理论。它还将定义什么是优秀的学术论文。

## Course Description

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 well being 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).

Throughout the course, students will learn about the characteristics of critical (Jewish) thinking and the making of original ideas. The course will provide examples of Hegelian (actually Fichte's) thesis-antithesis-synthesis dialectic, which can explain the development of, for example, music or linguistic theories. The course will champion an 'on the one hand' – 'on the other hand' (Jewish)

way of thinking, as opposed to a Black & White (B&W), Right & Wrong mindset. It will demonstrate how a dichotomous B&W approach results in cross-cultural miscommunication, for example misunderstanding British English by failing to recognize Double Language, in which the actual and literal meanings of the statement diverge. The course will also argue the advantages of a trans-disciplinary approach as a way of generating new, hybrid theories. It will also characterize what constitutes a good academic thesis.

## 教学大纲

| 教学内容   | 学时 |
|--|----|
| 1.Language Revival: WHY?: Moral, Ethical and Aesthetic Justifications for Language Revival and Utilitarian Justifications for Language Revival<br><br>为何进行语言复兴? ----从道德、理论审美以及功利主义层面的论证  | 2  |
| 2.Language Revival: WHY?: Epistemological, Cognitive, Psychological and Economic Justifications for Language Revival<br><br>为何进行语言复兴? ——认识论、认知、心理以及经济层面的论证   | 2  |
| 3.Language Revival: HOW?: Revivalistics as a New Trans-Disciplinary Field of Inquiry<br><br>怎样进行语言复兴?<br><br>——通过复古方式进行的全新跨学科探究  | 2  |
| 4. Language and DNA: What are the similar processes in Genomics and Revivalistics?, The Stammbaum (Family Tree) Model vs the Congruence Principle: Tree of Life or Network of Life? Cross-Fertilization, Natural Selection and Genetic Mix & Match in Language Revival All Over the Globe<br><br>语言和基因: 基因组和语言复兴有何相同过程? 家谱模式 VS 一致性原则: 线性人生亦或是网状式人生? 关于全球语言复兴中的相互融合、物竞天择和遗传混合及匹配 | 2  |
| 5.The Case of Hebrew: Grammar<br><br>语法——希伯来语案例研究分析  | 2  |
| 6.The Case of Hebrew: Vocabulary, Phono-Semantic Matching<br><br>词汇、音意译——希伯来语案例研究分析  | 2  |
| 7.The Case of the Barngarla Aboriginal Language (Australia)<br><br>澳洲土著语-Barngarla 的案例研究分析   | 2  |
| 8.Critical Thinking, Originality, Trans-Disciplinarity and Communication<br><br>关于批判性思维, 独创性, 跨学科以及沟通方面的研究   | 2  |

## 考核方式

Essay 70%

## 参考资料

1. Ash, Anna; Hooler, Pauline, Williams, Gary; and Walker, Ken 2011. 'Maam Ngawaala: Biindu Ngaawa Nyanggan Bindaayili. Language Centres: Keeping Language Strong' in John Hobson, Kevin Lowe, Susan Poetsch and Michael Walsh (eds), *Re-Awakening languages: Theory & practice in the revitalisation of Australia's Indigenous languages*. Sydney: Sydney University Press.
2. Clark, I.D. & Kostanski, 2005, 'Reintroducing Indigenous Placenames – Lessons from Gariwerd, Victoria, Australia, Or, How to address toponymic dispossession in ways that celebrate cultural diversity and inclusiveness', Abstract submitted to 'Names in Time and Space', Twenty Second International Congress of Onomastic Sciences, 28 August – 4 September 2005, Università Di Pisa, Italy.
3. Crystal, David 2000. *Language Death*. Cambridge, UK: Cambridge University Press.
4. Dalby, Andrew 2003. *Language in Danger: The Loss of Linguistic Diversity and the Threat to our Future*. New York: Columbia University Press.
5. Fishman, Joshua A. 1980. 'Minority Language Maintenance and the Ethnic Mother Tongue School,' *Modern Language Journal*, 64 (2): 167-172.
6. Gunstone, Andrew 2008. 'Australian University approaches to Indigenous policy'. *Australian Journal of Indigenous Education* 37: 103-108.
7. Hagège, Claude 2009. *On the Death and Life of Languages*. New Haven: Yale University Press.
8. Harlow, Ray 1993. 'Lexical Expansion in Maori'. *Journal of the Polynesian Society* 102.1: 99-107.
9. Hinton, Leanne 1994. *Flutes of Fire. Essays on California Indian Languages*. Heydey Books, Berkeley.
10. Hinton, Leanne & Ken Hale (eds) 2001. *The Green Book of Language Revitalization in Practice*. Academic Press, San Diego etc.
11. Hinton, Leanne with Matt Vera and Nancy Steele 2002. *How to Keep your Language Alive. A commonsense approach to one-on-one language learning*. Heydey Books, Berkeley.
12. Hinton, Leanne and Ahlers, Jocelyn 1999. 'The Issue of "Authenticity" in California Language Restoration'. *Anthropology & Education Quarterly* (Authenticity and Identity: Lessons from Indigenous Language Education, March 1999) 30.1: 56-67.
13. Hobson, John, Kevin Lowe, Susan Poetsch & Michael Walsh (eds) 2010. *Re-Awakening Languages. Theory and practice in the revitalisation of Australia's Indigenous languages*. Sydney University Press.
14. Lewis, Geoffrey L. 1999. *The Turkish Language Reform: A Catastrophic Success*. Oxford: Oxford University Press.
15. McKay, Graham 2007. 'Language maintenance, shift and planning', pp. 101-130 of Gerhard Leitner and Ian Malcolm (eds), *The Habitat of Australia's Aboriginal Languages: past, present, and future*. Berlin: Mouton de Gruyter.
16. McKay, Graham 2009. 'English and Indigenous languages in the Australian language policy environment', pp. 283-297 of Honglin Chen and Ken Cruickshank (eds), *Making a Difference: Challenges for Applied Linguistics*. Newcastle upon Tyne: Cambridge Scholars Press.



17. Mühlhäusler, Peter & Richard Damerau 2004 Economic Costs and Benefits of Australian Indigenous Languages. <http://www.arts.gov.au/indigenous/MILR/publications>
18. Ngarritjan-Kessarlis, T. & Ford, L. 2007. Tyikim/Blekbala perspectives on language. In G. Leitner & I. Malcolm (eds). *The habitat of Australia's Aboriginal languages: Past, present and future*. Berlin: Mouton de Gruyter, 355-369.
19. Penfield, Susan D., Angelina Serratos, Benjamin V. Tucker, Amelia Flores, Gilford Harper, John Hill Jr. and Nora Vasquez 2008 Community collaborations: best practices for North American Indigenous language documentation. *International Journal of the Sociology of Language* 191, 187–202.
20. Proctor, Jo and Gale, Mary-Anne (eds) 1997. *Tauondi speaks from the heart: Aboriginal poems from Tauondi College*. Port Adelaide : Tauondi College, 1997.
21. Reid, Nicholas 2011. 'English Influence on the Pronunciation of Re-awakened Aboriginal Languages' in John Hobson, Kevin Lowe, Susan Poetsch and Michael Walsh (eds), *Re-Awakening languages: Theory & practice in the revitalisation of Australia's Indigenous languages*. Sydney: Sydney University Press.
22. Sapir, Edward 1921. *Language. An Introduction to the Study of Speech*. New York: Harcourt, Brace.
23. Thieberger, Nicholas 1990. 'Language Maintenance: Why Bother?'. *Multilingua - Journal of Cross-Cultural and Interlanguage Communication* 9.4: 333-358.
24. Truscott, Adriano and Ian Malcolm 2011. 'Closing the Policy-Practice Gap: Making Indigenous Language Policy More than Empty Rhetoric' in John Hobson, Kevin Lowe, Susan Poetsch and Michael Walsh (eds), *Re-Awakening languages: Theory & practice in the revitalisation of Australia's Indigenous languages*. Sydney: Sydney University Press.
25. Walsh, Michael 2002. 'Language ownership: a key issue for Native Title', in John Henderson and David Nash (eds) *Language and Native Title*. Canberra: Native Title Research Series, Aboriginal Studies Press, 230-244.
26. Walsh, Michael 2003. 'Raising Babel: language revitalization in NSW, Australia', in Joe Blythe and R. McKenna Brown (eds) *Maintaining the Links. Language, Identity and the Land. Proceedings of the Seventh Conference Presented by the Foundation for Endangered Languages. Broome, Western Australia, 22-24 September 2003*. Bath: Foundation for Endangered Languages, 113-117.
27. Walsh, Michael 2005. 'Will Indigenous languages survive?', *Annual Review of Anthropology* 34: 293-315.
28. Walsh, Michael 2007. 'Indigenous languages: Transitions from the past to the present' in Gerhard Leitner and Ian Malcolm (eds.) *The Habitat of Australia's Aboriginal Languages: Past, Present and Future*. Berlin: Mouton de Gruyter, 79-99.
29. Walsh, Michael 2011. 'Why language revitalization sometimes works' in John Hobson, Kevin Lowe, Susan Poetsch and Michael Walsh (eds), *Re-Awakening languages: Theory & practice in the revitalisation of Australia's Indigenous languages*. Sydney: Sydney University Press.
30. Walsh, Michael & Troy, Jakelin 2005. 'Languages Off Country? Revitalizing the 'Right' Indigenous Languages in the South East of Australia', in Nigel Crawhall and Nicholas Ostler (eds.) *Creating Outsiders: Endangered Languages, Migration and Marginalization. (Proceedings of Ninth Conference of the Foundation for Endangered Languages, Stellenbosch, South Africa, 18-20 November 2005)*. Bath: Foundation for Endangered

Languages, 71-81.

31. Wong, Laiana 1999. 'Authenticity and the Revitalization of Hawaiian'. *Anthropology & Education Quarterly* (Authenticity and Identity: Lessons from Indigenous Language Education, March 1999) 30.1: 94-115.
32. Zuckermann, Ghil'ad 2004 'Cultural Hybridity: Multisourced Neologization in "Reinvented" Languages and in Languages with "Phono-Logographic" Script'. *Languages in Contrast* 4.2: 281-318.
33. Zuckermann, Ghil'ad 2009. 'Hybridity versus Revivability: Multiple Causation, Forms and Patterns.' *Journal of Language Contact*, Varia 2: 40-67.
34. Zuckermann, Ghil'ad & Walsh, Michael 2011. "Stop, Revive, Survive!: Lessons from the Hebrew Revival Applicable to the Reclamation, Maintenance and Empowerment of Aboriginal Languages and Cultures". *Australian Journal of Linguistics* 31: 111-127. [http://www.zuckermann.org/pdf/Revival\\_Linguistics.pdf](http://www.zuckermann.org/pdf/Revival_Linguistics.pdf) Also published as Chapter 28 of *Making Sense of Language Readings in Culture and Communication* (2012), Second Edition, edited by Susan D. Blum.
35. Zuckermann, Ghil'ad & Monaghan, Paul 2012. "Revival linguistics and the new media: Talknology in the service of the Barngarla language reclamation", pp. 119-126 of *Foundation for Endangered Languages XVI: Language Endangerment in the 21st Century: Globalisation, Technology & New Media*. Auckland, New Zealand.
36. Zuckermann, Ghil'ad, Shiori Shakuto-Neoh and Giovanni Matteo Quer 2014. 'Native Tongue Title: Proposed Compensation for the Loss of Aboriginal Languages', *Australian Aboriginal Studies* (AAS) 2014/1: 55-71.
37. Zuckermann, Ghil'ad & Walsh, Michael 2014. "'Our Ancestors Are Happy!': Revivalistics in the Service of Indigenous Wellbeing', pp. 113-119 of *Foundation for Endangered Languages XVIII: Indigenous Languages: Value to the Community*. Naha, Ryukyuan Island, Okinawa, Japan.

# CL021

西班牙文化—基于历史和艺术

Spanish Culture---Based on History and Arts

农业与生物学院 Rafael Martín Rodríguez

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

该课程涉及西班牙文化、历史和艺术。通过对西班牙历史的讲授以及结合各时期艺术和文学的介绍，为学生提供一个全面的，多维度的西班牙文化视角。通过课程的学习，不仅能够对西班牙历史文化有个准确的理解，更能对西班牙的几个重要历史时期及其意义有所了解，并且通过讨论和思考，将局域环境与周边大环境相联系，将文化、历史和艺术相结合，促进综合性的文化思考。

通过该课程，学生能够在西班牙历史情境中对西班牙文化有所认识，并且通过艺术、文学和传统的应用来理解西班牙文化。学生最终能够辨认出西班牙历史的不同时期以及与之相关的文化艺术特征，从而更综合得理解西班牙文化的产生和形态。

## Course Description

Courses in history, art and culture of Spain. Based on the history and the tools of art and literature is 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.

## 教学大纲

| 教学内容  | 学时 | 教学方式   | 其他要求   |
|---|----|--|--|
| 1. 西班牙文化<br>西班牙区域文化、西班牙文学的神秘、西班牙的节庆、今日西班牙<br>1. Spanish culture<br>Spain by regions,<br>the myths of Spanish literature,<br>festivals in Spain, Spain today | 8  | 课堂讲授知识和解释概念。在导师指导下进行课堂讨论以深入学习；学生将会就某一个案例或概念进行讨论，交换观念并予以评论，在导师指导下在各小组中得出结论。同时也给予同学的个性化观 | 1. 作业要求<br>课外阅读，<br>小组学习<br>2. 基本要求<br>认真听讲，<br>积极参与讨论，<br>增加课外阅读，<br>完成所布置课 |
| 2. 西班牙历史<br>早期西班牙史、西班牙语言的起源、西班牙黄金时代、西班牙乡村历史、西班牙历史中  | 8  |  |  |

|  |   |                                   |                                       |
|--|---|-----------------------------------|---------------------------------------|
| <p>的神话和传说、浪漫主义与现实主义、西班牙内战、1939年后的西班牙、西班牙与中国关系</p> <p>2.Spanish History<br/>The Spanish old age, origin of the Spanish language, the century of Spanish gold, villages of Spain with history, myths and legends of the history of Spain, romanticism and realism, the Spanish civil war, Spain since 1939, history of the international relations between Spain and China</p> |   | <p>点留下充分空间和讨论余地，以鼓励积极和有创意的思考。</p> | <p>外任务</p> <p>3. 考查方式<br/>课堂提问，讨论</p> |
| <p>3.西班牙艺术<br/>绘画中的西班牙人、西班牙中世纪建筑、文艺复兴与巴洛克、委拉斯贵支、戈雅、达利和毕加索、高迪</p> <p>3.Spanish art<br/>The Spaniards through art, Spanish medieval architecture, Renaissance and Baroque, Velázquez, Goya, Dalí and Picasso, Gaudi</p>  | 8 |                                   |                                       |
| <p>4.小组作业的准备时间</p> <p>4. Time for the preparation of group work</p>  | 4 |                                   |                                       |
| <p>小组研究报告</p> <p>Group report and presentations</p>  | 4 |                                   |                                       |

### 考核方式

60% 小组研究报告, 20% 课堂活动, 20% 出勤  
60% group report and presentation, 20% class activities, 20% class attendance

### 参考资料

《西班牙历史(西班牙语国家国情多媒体系列教程)》,外语教学与研究出版社  
《A Short History of Spain》, Tredition Classics  
PPT, 影印, 音乐, 录像  
PowerPoint, photocopies, music, videos

# CL016

卢梭及其思想

Rousseau and His Thought

人文学院 Christophe Van Staen

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

本课程将全面讲解卢梭与传统和现代性的各种关系。除了详细介绍这个十八世纪法国哲学家的生平与著作外，本课程旨在向交大的学生提供最新的有关卢梭的信息、阅读、学术进展以及遗产；全面讲解他的主要著作和其他著作，通过关注他那些鲜为人知的科学著作，讲述对他的最新解读，讲解与他有关的浩瀚的文学批评，讲解他在作为现代性开端的法国启蒙运动中的独特性。

## Course Description

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.

## 教学大纲

| 教学内容                   | 学时 | 教学方式  | 作业及要求 | 基本要求 | 考查方式 |
|------------------------|----|-------|-------|------|------|
| 1, 法国启蒙运动              | 2  | 讲授、讨论 |       |      |      |
| 2, 18 世纪法国主要思潮         | 2  | 讲授、讨论 |       |      |      |
| 3, 卢梭的起点               | 2  | 讲授、讨论 |       |      |      |
| 4, 第一阶段: 卢梭的科学实践       | 2  | 讲授、讨论 |       |      |      |
| 5, 第二阶段: 卢梭的政治实践       | 2  | 讲授、讨论 |       |      |      |
| 6, 第三阶段: 卢梭的第一篇论述      | 2  | 讲授、讨论 |       |      |      |
| 7, 第四阶段: 音乐、卢梭的哲学与社会交往 | 2  | 讲授、讨论 |       |      |      |
| 8, 第五阶段: 第二篇论述, 论人     | 2  | 讲授、讨论 |       |      |      |

|                         |   |       |  |  |  |
|-------------------------|---|-------|--|--|--|
| 9, 第六阶段: 告别启蒙派          | 2 | 讲授、讨论 |  |  |  |
| 10, 第七阶段: 《新爱洛伊丝》       | 2 | 讲授、讨论 |  |  |  |
| 11, 第八阶段: 《社会契约论》与《爱弥尔》 | 2 | 讲授、讨论 |  |  |  |
| 12, 第九阶段: 卢梭的自传《忏悔录》    | 2 | 讲授、讨论 |  |  |  |
| 13, 卢梭的去世及其思想遗产         | 2 | 讲授、讨论 |  |  |  |
| 14, 卢梭与现代性              | 2 | 讲授、讨论 |  |  |  |
| 15, 总结                  | 2 | 讲授、讨论 |  |  |  |
| 16, 21 世纪对卢梭思想的回顾和反思    | 2 | 讲授、讨论 |  |  |  |

### 考核方式

期末考试采取英语口语试的方式。要求每位学生讲解学过的一个部分, 将采用隐晦的提问方式, 从而全面评测他们对于卢梭生平与思想所学到的内容。

The assessment will be oral, and in English. All the students will be asked to explain one of the sections covered, this question being the implicit launch of a more conversational exam, during which I will assess the overall knowledge they will have acquired on Rousseau's life and thought.

平时成绩 30%

期末考试 70%

### 参考资料

卢梭主要著作的中英文译本

# CL022

当今的生态批评

Ecological Criticism Today

人文学院 Janell Watson

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

美国人文学科的生态批评出现于二十世纪六十年代和七十年代。这个学术领域越来越走向了跨学科、跨国际以及理论化。本课程将集中介绍文化和理论方面的生态问题的最近著述。

## Course Description

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.

## 教学大纲

| 教学内容                    | 学时 | 教学方式    | 作业及要求 | 基本要求 | 考查方式 |
|-------------------------|----|---------|-------|------|------|
| Philosophy of Ecology   | 8  | Lecture | 论文    | 阅读材料 | 提问   |
| Art and the Environment | 8  | Lecture | 论文    | 阅读材料 | 提问   |
| Environmental Fiction   | 8  | Lecture | 论文    | 阅读材料 | 提问   |
| Environmental Fiction   | 8  | Lecture | 论文    | 阅读材料 | 提问   |

## 考核方式

(成绩构成) 学期论文 50%，平时成绩 30%，讨论 20%。

## 参考资料

1. Morton, Timothy. 2013. "Introduction." In *Hyperobjects: Philosophy and Ecology after the End of the World*, 3–20. Minneapolis: University of Minnesota Press. 240 pages.
2. Brown, Andrew. 2014. *Art & Ecology Now*. New York, NY: Thames & Hudson. 256 pages.
3. Sterling, Bruce. 2009. *The Caryatids*. Del Rey. 306 pages.
4. Maxwell, Richard, and Toby Miller. 2012. *Greening the Media*. New York: Oxford University Press. 256 pages.

# PI027

## 现代伦理学 Modern Ethics

人文学院 Antoine Guggenheim

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|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

### 课程简介

本课程为面向全校各年级学生的夏季学期公共选修课。

本课程将对当前伦理学方面的相关问题做一个综述。伦理学是关于道德问题的理论，是研究道德的产生、发展、本质、评价、作用以及道德教育、道德修养规律的学说。其中最重要的是道德与经济利益、物质生活的关系、个人利益与整体利益的关系问题。对这些问题的不同回答，形成了不同的甚至相互对立的伦理学派别。学生们将接触到来自人类活动不同领域的哲学家、科学家、积极分子以及利益相关者的观点和演说，涉及遗传学、经济学、环境科学以及政治研究等。

本课程将会以“商业和可持续经济伦理”、“遗传学和跨人文主义，个体化用药”、“民主与精神性”、“文化与现代性：伦理的道路”这四个主题的形式报告，围绕着相关学者、科学家的论文提出问题，力图在小学期课程期间把当前伦理学相关研究成果介绍给学生。

期望通过课程的学习，让学生学会发现问题的新的意义、议论的价值以及所得结论的可靠性。最关键的收获是让学生对现代性建立起一个开放的理解，并思考我们该如何从现代性的意义中找到继承和发扬传统的可能。

### Course Description

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, 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



## 教学大纲

| 教学内容            | 学时 | 教学方式    | 作业及要求        | 基本要求     | 考查方式 |
|-----------------|----|---------|--------------|----------|------|
| 商业和可持续经济伦理      | 8  | 课堂教学及讨论 | 阅读文章，思考并回答问题 | 积极参与课堂讨论 | 课堂讨论 |
| 遗传学和跨人文主义，个体化用药 | 8  | 课堂教学及讨论 | 阅读文章，思考并回答问题 | 积极参与课堂讨论 | 课堂讨论 |
| 民主与精神性          | 8  | 课堂教学及讨论 | 阅读文章，思考并回答问题 | 积极参与课堂讨论 | 课堂讨论 |
| 文化与现代性：伦理的道路    | 8  | 课堂教学及讨论 | 阅读文章，思考并回答问题 | 积极参与课堂讨论 | 课堂讨论 |

## 考核方式

课堂表现（30%）+课堂讨论（30%）+全课程总结报告（40%）

## 参考资料

教材：

由任课教师课前提供相关学者或者科学家的文章。

参考资料：

经济类、生物遗传及医学类、环境科学类、时事政治类报刊杂志，推荐法国《世界报》、《费加罗报》、《自由报》。

# BI062

DNA 的奥秘:

遗传物质的起源, 进化, 损伤与疾病

The Mystery of DNA: Origin, Evolution, Damage and Disease

生命科学技术学院 曹维国

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

介绍生命遗传物质 DNA 的起源、进化, 各种生命形式的环境适应性进化与 DNA 进化, DNA 与生命延续关系, DNA 损伤, 突变和和疾病(特别是各种遗传病与癌症)间关系。

## Course Description

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).

## 教学大纲

1. History of DNA's discovery DNA 发现的历史故事
2. Abiotic synthesis of genetic materials 遗传物质的非生物性合成
3. Biochemical features of DNA structure DNA 生化结构特点
4. Chemical nature of DNA damage DNA 损伤化学本质
5. Source of DNA damage DNA 突变来源
6. DNA changes and diseases DNA 损伤与疾病
7. Synthetic biology 合成生物学

## 考核方式

包括 Presentations, Class participation, and essays (出勤率、课堂参与度、主题报告)。

## 参考资料

DNA and origin of life: information, specification, and explanation; DNA repair and mutagenesis; cancer biology; and related literature

(DNA 与生命起源、DNA 修复与基因突变, 癌症生物学, 相关科普或科技文献)

# S0054

全球视野下的美利坚

The United States in a Global Perspective

外国语学院 Don Schwartz

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

介绍美国外交政策，移民政策，军事冲突，包括美西战争，美墨战争，一战，二战，朝鲜战争，越南战争，中东政策等

## Course Description

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, 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.

## 教学大纲

| 教学内容  | 学时 | 教学方式                             | 作业及要求   | 基本要求                                  | 考查方式  |
|---|----|----------------------------------|---|---------------------------------------|---|
| Introduction  | 2  | Lectures and Discussion<br>讲授及讨论 | Assigned Essays and Website Forum<br>小论文及网络论坛 | Presence and Participation<br>出勤及参与讨论 | Discuss and Finish Assigned Work<br>课堂讨论及作业 |
| Lecture 1– The American Revolution in Comparative Perspective 美国独立  | 2  |                                  |   |                                       |   |
| Lecture 2 – The International Dimensions of America’s Westward Expansion 西进运动                               | 2  |                                  |   |                                       |   |
| Lecture 3 – The American Civil War Compared to Wars for Unification in 19 <sup>th</sup> Century Europe 美国内战 | 2  |                                  |   |                                       |   |
| Review 复习及讨论  | 2  |                                  |   |                                       |   |
| Lecture 4 – The Rise of Big Business in the U.S., Britain and Japan 美日英大企业发展                                | 2  |                                  |   |                                       |   |
| Lecture 5 – 19 <sup>th</sup> Century American Imperialism   | 2  |                                  |   |                                       |   |

|  |   |                                       |  |  |  |
|--|---|---------------------------------------|--|--|--|
| Compared to European Colonialism 美帝国主义   |   |                                       |  |  |  |
| Review 复习及讨论   | 2 |                                       |  |  |  |
| Lecture 6 – Woodrow Wilson’s Internationalism and Lenin’s Internationalism 威尔逊主义                                       | 2 |                                       |  |  |  |
| Lecture 7 – The American Response to the Great Depression Compared to the Response of other Industrialized Nations 大萧条 | 2 |                                       |  |  |  |
| Review 复习及讨论   | 2 |                                       |  |  |  |
| Lecture 8 – World War Two as a Race War: American and Japanese Perceptions of the Enemy 二战                             | 2 |                                       |  |  |  |
| Lecture 9 – The Cold War from the American and Soviet Perspectives 冷战思维  | 2 |                                       |  |  |  |
| Lecture 10 – Globalization and American Power 全球化与美国   | 2 |                                       |  |  |  |
| Review 复习及讨论   | 2 |                                       |  |  |  |
| Test 测试  | 2 | In Final paper or Test paper<br>论文或测试 |  |  |  |

## 考核方式

(成绩构成) Presence10 + Discussion20 + Essay10 + interview10 + Test50

## 参考资料

1. Carl J. Guarneri, America Compared: American History in International Perspective, vols. 1 and 2, Houghton Mifflin, 2005.
2. Matthew Wei, A Panoramic History of American Civilization, Peking Uni Press & Shanghai Jiaotong Uni Press, 2013.

# PH062

见微知著：微观世界内的物理现象

One Tiny Clue Reveals the General Trend:  
Phenomena in Submicron World

港澳台办公室 徐治平

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

本课程属于通识性质，旨在针对仅具基础物理与化学背景之学生介绍胶体与界面科学，期能使其对该学科之主要内涵有初步之认识，以利于其未来解决相关问题、阐释现象、与研发相关应用时可据以入门。胶体科学涵盖了当代广受重视之奈米科学与技术，应用广泛，对理、工、医、农任一学门之本科生与研究生而言，皆为不可或缺的基础学识。未来学生无论进入研究所深造或任职于产业界，具备本课程相关的基础将有助于其发展。

微/奈米(胶体)粒子于日常生活、自然现象、与工业程序中无所不在；虽然肉眼无法直接观测，但是展现了许多丰富、有趣、且重要的特质。本课程将由胶体粒子系统的物理化学特质谈起，逐一介绍与其相关的基本现象与应用，包括其悬浮系统之稳定性以及粒子在各类外力，如电场、浓度场、温度场等，驱动下的运动行为、与相关的应用。

## Course Description

This course is of general education nature, focusing on introducing colloid and interface science to undergraduate students who have only elementary physics and chemistry background. It is anticipated that students taking this course can possess preliminary knowledge about the main contents of the subjects introduced so that they have basic information when solving relevant problems, interpreting phenomena, or developing applications. Colloid and interface science covers nanoscience and nanotechnology, nowadays extremely popular subjects having potential applications in essentially every branch of science and engineering. It is highly desirable and necessary for students in these areas to have basic knowledge in those subjects. It is advantageous to students equipped with the knowledge introduced, whether they pursue an advanced degree in the future or in their career.

Micro- and nano-sized particles are ubiquitous in daily life, natural phenomena, and industrial operations. Although these particles are invisible in bare eyes, they exhibit abundant, interesting, and important characteristics. This course is begun by examining the physicochemical properties of colloidal systems, followed by introducing phenomena such as the stability of these systems, their phoretic behaviors arising from an applied field, such as electric, concentration, and thermal fields, and relevant applications.

## 教学大纲

| 教学内容   | 学时  | 教学方式          | 作业及要求 | 基本要求 | 考查方式 |
|--------|-----|---------------|-------|------|------|
| 胶体系统分类 | 0.5 | 课堂口述<br>投影、板书 | 无     | 了解内容 | 课堂问答 |

|                   |     |               |     |        |      |
|-------------------|-----|---------------|-----|--------|------|
| 胶体的理化特质           | 0.5 | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 胶体悬浮系统之凝聚/分散现象与原理 | 2   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 生物胶体之行为           | 1   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 应用例一:水与废水处理       | 2   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 应用例二:吸附/脱附现象      | 2   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 应用例三:材料与表面改质      | 2   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 课堂笔试              | 1   | 关书            | --- | 通过及格标准 | ---  |
| 微粒的自然运动-布朗运动      | 1   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 电场内的运动-电泳         | 3   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |
| 浓度场内的运动-扩散泳       | 3   | 课堂口述<br>投影、板书 | 无   | 了解内容   | 课堂问答 |

### 考核方式

两次课堂笔试，每次各一小时

### 参考资料

- 1、Robert J. Hunter, Foundations of Colloid Science, Volumes 1 & 2, Oxford University Press, New York, 1992.
- 2、张有义、郭兰生编译(Duncan J. Shaw 原著), 胶体及界面化学入门, 高立图书, 台北, 1997.

# OC001

认识海洋波浪

Introduction to Ocean Waves

港澳台办公室 丁肇隆

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

地球表面 70%被水覆盖，且蕴藏了丰富的资源，为了要开采这些资源，就必须了解海洋波浪的特性。本课程主要在介绍微小振幅波理论，长波理论及波浪之统计方法等，让学生对波浪之运动及其工程性质能有所了解，进一步认识其在海洋工程实际应用上的重要性。

## Course Description

The surface of earth is covered by water including various natural resources inside. In order to exploit these natural resources, the characteristics of ocean waves must be realized and studied. This course will introduce the theory of small-amplitude waves, long wave theory and the statistics of ocean waves. Let students know the motions of water waves and its related engineering properties. At the end, they will realize the importance of waves in the design of offshore and coastal structures.

## 教学大纲

| 教学内容                                  | 学时 | 教学方式         | 作业及要求   | 基本要求 | 考查方式 |
|---------------------------------------|----|--------------|---------|------|------|
| Introduction                          | 2  | 使用 ppt 及黑板讲演 | 无       |      |      |
| Conservation of mass, Eq. of motion   | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |
| Equation of motion in ocean           | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |
| scaling of motion                     | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |
| Small amplitude wave theory           | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |
| Theory of waves                       | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |
| gravity wave solution                 | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |
| Dispersion relation and standing wave | 2  | 使用 ppt 及黑板讲演 | 作业下次上课交 |      |      |

|   |   |              |         |  |  |
|---|---|--------------|---------|--|--|
| Engineering properties of gravity waves | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| Engineering properties of gravity waves | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| 期中考                                     | 2 |              |         |  |  |
| wave energy transfer                    | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| Transformations of waves                | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| shallow water waves                     | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| shallow water waves                     | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| Statistics of ocean waves               | 2 | 使用 ppt 及黑板讲演 | 作业下次上课交 |  |  |
| 期末考                                     | 2 |              |         |  |  |

### 考核方式

作业(20%), 期中考 (40%)和期末考 (40%)

### 参考资料

参考教材: "Water Wave Mechanics for Engineers and Scientists" by R. G. Dean and R. A. Dalrymple



# EE028

了解无线通讯: 过去、现在与未来

Understanding Wireless Communication: Past, Present and Future

港澳台办公室 毛绍纲

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

你/妳有手机吗?根据国外公司 Tomi Ahonen 研究指出,至 2014 年底,手机数量已达 73 亿支,超过全球 42 亿人口了。报告并显示,普通人平均每天会看手机 150 次,去掉每天睡眠时间,在醒着时平均每 6.5 分钟会看一次手机。手机的出现拉近了人与人的距离,现代人几乎随时随地都离不开手机,除了工作和通讯的需要,吃饭、睡觉、甚至上厕所都要牢牢地握着手机。手机的确使人类愈发强大,有了它,全世界都能掌握在手中。因此它的技术与功能就更形复杂与多样。而这个 21 世纪影响人类最大的发明之一,就是倚赖电磁波所构建的无线通讯设备。

本课程将引导同学从无线上网的功能出发,介绍讯息传送的原理,再拆解各式无线通讯设备出发,包括手机、笔记本电脑、平板电脑,探讨其所需的软件与硬件,来了解各式无线通讯设备的工作原理与讯号收发机制,最后再介绍电磁波对人体的影响。并配合课堂讲授,辅以多媒体内容介绍与无线通讯系统实测。本课程涵盖无线通讯技术由浅入深的介绍、鉴古知今的剖析,适合对无线通讯有兴趣之同学选修。

## Course Description

Do you use a cell phone? According to a research study by a foreign company Tomi Ahonen pointed out, by the end of 2014, the number of mobile phones has reached 7.3 billion, more than the world's population of 4.2 billion. This study also shows that on average, people check their cell phones 150 times a day, and they check them every 6.5 minutes whenever they are awake. The invention of mobile phones has shortened the distance between one person and another. In modern society, people need mobile phones almost anytime and anywhere, no matter when they are working, eating, sleeping, and even when they are in the restroom. The wide use of mobile phones no doubt makes people more powerful, holding the world within their grasp. Therefore, the techniques and functions of mobile phone are even more complex and diversified as time goes by. And more importantly, were it not for the construction of all kinds of wireless communication equipment by means of electromagnetic waves, the mobile phone would not have been one of the greatest inventions of the 21st century. This course will guide students starting from the foundations of wireless communication, introduce the principle of information transmitting, and then tear down all kinds of wireless communications equipments, such as mobile phones, laptops, tablet PCs. Students can explore the software and hardware these devices need and understand the operating principles of transceiver design. Finally the course will present the impact of electromagnetic waves on the human body. This course covers state-of-the-art wireless technology with multi-media demonstration for wireless communication

system. It is suitable for students interested in wireless technology.

## 教学大纲

| 教学内容       | 学时 | 教学方式  | 作业及要求 | 基本要求   | 考查方式 |
|------------|----|-------|-------|--------|------|
| 无线通讯技术简介   | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 电学与磁学      | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 马克斯威方程式    | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 手机         | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 无线网络       | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 物联网        | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 吸引人的无线通讯设备 | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |
| 下世代无线通讯技术  | 4  | 讲演与展示 | 无     | 课堂组织讨论 | 课堂讨论 |

## 考核方式

分组讨论成果报告

## 参考资料

自编教材

# EN049

莎士比亚戏剧

Shakespeare's Drama

港澳台办公室 邱锦荣

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英汉双语       | 学时 | 32 |

## 课程简介

### 课程教学目标

(1) 以莎翁为师，学习多面性的思辨与表达能力。莎翁剧本在世界文学经典中拥有最丰富的影视资源。以影视教材引领学生进入有深度的文本，使经典阅读成为学生的常规性的阅读习惯，并且内化为终身学习的目标。

(2) 诱导优秀学生进入英语文的深层赏析，终极目标为在各类国际社群场合可以运用雅正的英文交流。

### 主要教学内容

本课程拟以循序渐进的方式带领学生进入莎剧的文本阅读。莎翁所处的文艺复兴时期乃是西方人文、艺术发展的盛世。藉由莎剧管窥 16 世纪英国的历史文化，深化学生思考的向度。课程首先由剧场与当时社会的互动，引入剧本与社会文化相互形塑的认知。上课方式将以多媒体教具进行，含舞台剧、电影版本 DVD、PPT 投影，以求视觉映象帮助初学者克服对文本的畏惧。教授将推荐关莎剧视觉媒体的网络资源，以供学生作为终生自主学习(self-directed learning)的教材。教材全部英文，授课以英文为主，中文为辅。

## Course Description

### Course Goals

Aimed at introducing Shakespeare to Chinese students, this course has three goals:

1. Learning English with Shakespeare (namely, to be culturally literate)

Engaging students in in-depth reading of the greatest English poet and playwright via visual aids. Hopefully the learners could internalize cultural literacy as a life goal.

2. Learning to communicate in an effective way.

Shakespeare will be used as an authentic source of the English, as a pool of communicative language, and as a help to facilitate the learner's access to the English-using culture.

3. Improving students' ability to think, speak, express and debate in English language through modeling their English on Shakespeare.

### Course Content

This course will lead students step by step to read and digest selections from Shakespeare's drama, the best of its kind in English language. Since the 16<sup>th</sup> century Renaissance has been widely regarded as the prime time of English history, reading Shakespeare is doubly rewarded by A) learning English with Master Shakespeare and B) familiarizing oneself with the historical, social, political and cultural aspects of English Renaissance. This course will be divided into three

sections: guided reading with visual aids (PPT, films), in-class discussion, and students' group performance. Organized around lectures and student discussions/presentations, the class is designed to be collaborative throughout. Readings are all English; lectures will be rendered primarily in English plus Chinese explanation whenever appropriate and necessary.

## 教学大纲

| 教学内容  | 学时 | 教学方式                | 作业及要求                             | 基本要求                      | 考查方式 |
|---|----|---------------------|-----------------------------------|---------------------------|------|
| Introduction to Shakespeare's theatre & text                                    | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Shakespeare in Love</i> (film)   | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Romeo and Juliet</i>   | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Romeo and Juliet</i>   | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Othello</i> ; Group performance(*students teamed up to perform a small play) | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Othello</i>  | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Hamlet</i> ; Group performance   | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Hamlet</i>   | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>Hamlet</i>   | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>King Lear</i> ; Group performance  | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>King Lear</i>  | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |
| <i>King Lear</i>  | 2  | Lecture& discussion | Preparation for group performance | Participation& discussion | quiz |

|  |   |                      |                                   |                            |            |
|--|---|----------------------|-----------------------------------|----------------------------|------------|
| <i>A Midsummer Night's Dream</i><br><i>Macbeth</i> | 2 | Lecture & discussion | Preparation for group performance | Participation & discussion | quiz       |
| <i>A Midsummer Night's Dream</i><br><i>Macbeth</i> | 2 | Lecture & discussion | Preparation for group performance | Participation & discussion | quiz       |
| Group performance; review                          | 2 | Lecture & discussion | Preparation for group performance | Participation & discussion | quiz       |
| Last class   | 2 |                      |                                   |                            | Final Exam |

## 考核方式

1. class participation, discussion & quizzes 课堂参与、讨论及简易测验 25%
2. group performance 分组表演 25%
3. final exam 期末考试 50%

## 参考资料

教材及参考书目

教材：教授准备讲义。

以下5个剧本各选取2景(scenes)详细阅读，选读部分会包含在讲义里。

1. Romeo and Juliet
2. Othello
3. Hamlet
4. King Lear
5. A Midsummer Night's Dream

\* The selected scenes will be included in the course packet. However, the more ambitious ones choose to buy individual plays or a collection of complete works such as: The Riverside Shakespeare Complete Works; Bevington, David, ed. The Complete Works of William Shakespeare. (企图心旺盛议购买单本剧本例如Arden, Norton,或任何版本的莎翁全集)

# EE029

## 光电科技与生活应用

Science and Technologies of Photonics and Their Applications in Daily Life

港澳台办公室 林清富

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

### 课程简介

本课程(光电科技与生活应用)主要作为光电科技的入门知识,以深入浅出的方式,探讨一些基本原理和应用于生活当中的多种产品,例如照明,电视,显示器,触控屏幕,雷射指示笔,雷射雕刻,雷射医疗美容,传统相机,数字相机,太阳能电池,光纤通讯网络等等。希望此课程可以让学生一窥光学与光电领域的大概,也能够知道生活和光的密切关系。

### Course Description

This course is aimed to promote knowledge in light and photonics. The basic principles of photonics will be introduced. Then many daily applications using light and photonics knowledge will be discussed, hoping to make the close relation between light and daily life known to general publics. Those daily applications include lighting, television, displays, touch screen, laser pointers, camera, digital cameras, solar cells, fiber-optics communications, etc.

### 教学大纲

| 教学内容   | 学时 | 教学方式  | 作业及要求 | 基本要求 | 考查方式 |
|--|----|-------|-------|------|------|
| 光的故事: 什么照亮和丰富了我们的生命和生活?<br>Story of light: light up and enrich our daily life. | 4  | 讲演及互动 |       |      | 随堂问答 |
| 光的特性<br>Properties of light  | 4  | 讲演及互动 |       |      | 随堂问答 |
| 光学组件和应用<br>Optical components and applications                                 | 4  | 讲演及互动 |       |      | 随堂问答 |
| 光源与照明<br>Light sources and lighting  | 4  | 讲演及互动 |       |      | 随堂问答 |
| 雷射与应用<br>Lasers and applications   | 4  | 讲演及互动 |       |      | 随堂问答 |
| 显示技术<br>Display technologies   | 4  | 讲演及互动 |       |      | 随堂问答 |
| 太阳能光电<br>Solar cells   | 4  | 讲演及互动 |       |      | 随堂问答 |
| 光纤通讯网络<br>Fiber-optics communications  | 4  | 讲演及互动 |       |      | 随堂问答 |

## 考核方式

随堂问答及笔试

## 参考资料

作者：林清富教授

书名：光学与光电导论

出版社：五南图书出版股份有限公司

发行年份：2012 年

# EN050

多媒体时代的莎士比亚

Shakespeare in Multimedia Era

港澳台办公室 朱静美

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

莎士比亚为西方文学巨擘，当今的莎剧不仅活跃于剧场，还被改编成以歌剧、舞剧、以及电影、动画等形式演出。这些形式都以不同的技术表现莎剧的美学特征。其中 1940 年至 2010 年累积的莎剧改编电影不下千部、独成一类型。奥森·韦尔斯(Orson Welles)、黑泽明(Kurosawa)、劳伦斯·奥利佛(Laurence Olivier)、柴菲里尼(Franco Zeffirelli)、肯尼斯·布萊纳(Kenneth Branagh)、彼得·格林纳威(Peter Greenaway)、巴兹·鲁曼(Baz Luhrmann)等导演大师作品将莎剧电影推上艺术成就的高峰。此外，英国国家广播公司(简称 BBC)也在 1990 年代制作了一系列十二集的《莎士比亚名剧动画系列》(*Shakespeare: The Animated Tales*)，是目前市面上规模最大、最齐备的莎士比亚动画全集(每集长约三十分钟，改编自莎翁著名的十二部剧作)。该系列大量以意象取代文字、以图像直接冲击、轰炸观众的视觉神经。由于先天语言上的回异，传统莎剧舞台演出比较「明说」，因为在舞台上所有的视听意涵大多仰赖演员生动的念出富含譬喻的台词，勾起观众脑海中栩栩如生的想象画面。而电影和动画则以影像取代文字对观众诉说某一场景的主旨，表达模式较迂回，以象征、隐喻与变形呈现主角内心的主观意识，藉由其特有的图学符号形成另一套语言，因此电影和动画可能比书写作品更富于符号功能。

本课程引领学生发掘：(一) 莎剧经典转码成电影、动画时，导演大师是如何将「语言文字」为主导的莎剧，转化为依靠视觉感受的影像画面 / 图像？(二) 比较与分析电影导演在莎剧中的著名场景(如哈姆雷特的「戏中戏」、罗蜜欧与朱丽叶的「楼台会」、李尔王的「疯狂场景」等等)中的各种表现手法，帮助学生欣赏导演们如何呈现这些莎翁名剧场景的主题意涵。(三) 莎剧电影 / 动画中的人物造型、物件、空间设计、灯光、音乐等元素又是如何互相搭配而产生出具有反映母题弦外之音的效果？上述诸点是本课程意欲与学子分享的莎剧影像化之精髓所在。

## Course Description

Shakespeare is the leading figure of Western literatures; as of today, Shakespeare's plays are not only performed on the stage, but also have been adapted into operas, dance, dramas, films, animations, and other various forms of performances. These different acting styles display the aesthetic characteristics of Shakespeare's plays through various techniques. It is worth noticing that there are more than one thousand Shakespearean film adaptations released during 1940 to 2010, making film adaptation a unique genre of its own. The works of many master filmmakers, like Orson Welles, Akira Kurosawa, Laurence Olivier, Franco Zeffirelli, Kenneth Branagh, Peter Greenaway, and Baz Luhrmann, have pushed the Shakespearean film into the peak of artistic achievement. In addition, the British Broadcast Company (BBC), in collaboration with Russian



directors in the 1990s, undertook the project of producing a series of twelve volumes of *Shakespeare: The Animated Tales*. In this series, words are superseded by a colossal amount of images and visual impacts. In contrast to Shakespeare's stage performances which are comparatively "outspoken" in that they place full reliance on the actors to exhibit the audio-visual content through articulating lines profuse in metaphors to arouse vivid images in the audience's minds, filmic/animated pictures tend to rely on images rather than words to convey the theme of a specific scene. Particularly the inner minds of filmic/animated characters are largely presented by means of symbols, metaphors and metamorphoses, which contributes to the formation of a new language system abundant in unique graphic symbols. Filmic/animated works, in this light, can boast an even richer semiotic function than do literary ones.

This course aims at illustrating: 1) how the film and BBC animation directors translate verbally-oriented Shakespeare plays into filmic/animated pictures banking on visual effect. II) how to appreciate the filmmakers' ways of interpreting the motifs of the famous scenes in Shakespeare's plays by comparing and analyzing various techniques they use in presenting famous scenes such as the "play-within-a-play" in *Hamlet*, the "balcony scene" in *Romeo and Juliet*, and "King Lear' insanity" in *King Lear*. III) analyzing how animated figures, objects, lighting and music are collaborated by the BBC directors to produce implications that reflect dramatic themes. The key points above are the essences of the visualization of Shakespeare's plays this course would like to share with the students.

## 教学大纲

| 教学内容   | 学时 | 教学方式           | 作业及要求    | 基本要求 | 考查方式 |
|--|----|----------------|----------|------|------|
| 1. 莎士比亚与他的时代<br>2. 世纪末多媒体影像时代                            | 2  | 交互式讲座 & 影像片段赏析 |          |      |      |
| 从莎剧诗文到影像画面（一）：<br>1. 莎剧诗文特征<br>2. 莎剧的比喻、象征、隐喻性语言         | 2  |                |          |      |      |
| 从莎剧诗文到影像画面（二）：<br>1. 蒙太奇语言<br>2. 电影镜头                    | 2  |                |          |      |      |
| 电影符号学  | 2  |                |          |      |      |
| 古典 VS. 前卫莎剧电影：<br>《罗蜜欧与茱莉叶》：柴菲里尼 VS. 巴兹·鲁曼(Baz Luhrmann) | 4  |                | 小组轮流领导讨论 |      |      |
| 古典莎剧电影：<br>《麦克白》著名场景影像比较：<br>奥森韦尔斯、黑泽明 VS. 高达            | 4  |                |          |      |      |
| 古典 VS. 前卫莎剧电影：<br>《哈姆雷特》『独白』的镜头乾坤：<br>肯尼斯·布莱纳 VS. 阿米雅达   | 2  |                |          |      |      |

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| 高科技信息时代的莎士比亚：<br>1. 彼得·格林纳威的 Prospero's Books (The Tempest)的前卫莎片实验 | 4 |  |  |  |  |
| 高科技信息时代的莎士比亚：<br>2. 茱莉·泰摩的 Titus 的前卫莎片实验                           | 2 |  |  |  |  |
| 莎士比亚名剧动画的隐喻与变形：<br>1. 动画图学 VS. 莎剧诗文<br>2. 文字与图画的相互换身：莎剧诗文转码至动画     | 2 |  |  |  |  |
| 莎士比亚名剧动画的隐喻与变形：<br>3. 隐喻&变形在莎剧动画中的视觉体现<br>4. 莎剧动画的意象式表演            | 6 |  |  |  |  |

## 考核方式

期中小组报告&课堂领导讨论： 40%

期末报告： 40%

出缺席&平时课堂表现： 20%

\*凡上课缺席超过两次者，学期总成绩以不及格论。

## 参考资料

主要教材：

1. Brusberg-Kiermeier and JorgHelbig ed. Shakespeare in the Media: From the Globe Theatre to the World Wide Web. 2<sup>nd</sup> Ed. Frankfurt, Germany: Peter Lang, 2010.
2. Burt, Richard and Lynda E. Boose ed. Shakespeare, The Movie, II: Popularizing the Plays on Film, TV, Video, and DVD. London and New York: Routledge, 2003.
3. Cartelli, Thomas and Katherine Rowe. New Wave Shakespeare on Screen. Cambridge, UK: Polity, 2007.
4. Lehmann, Courtney. Shakespeare Remains: Theatre to Film, Early Modern to Postmodern. Ithaca & London: Cornell UP, 2002.

参考教材：

1. Almeredya, Michael. William Shakespeare's Hamlet: a Screenplay Adaptation. London: Faber and Faber, 2000.
2. Balázs, Béla. Theory of the Film: Character and Growth of a New Art. London: Dennis Dobson, 1972.
3. Best, Michael. "New Silk and Old Sack: Performing Shakespeare in New Media."

- Shakespeare's Local Habitations. Ed. KrystynaKujawińska-Courtney and R . S. White. Łódź: Łódź UP, 2007. 243-53. Print.
4. Boose Lynda and Richard Burt Eds. Shakespeare, The Movie II: Popularizing the Plays on Film, TV, and Video. Routledg: London and New York, 2003.
  5. Brooker, Peter and Will Brooker, eds. Postmodern After Images. London: Arnold, 1997.
  6. Coursen, H. R. Shakespeare in Space: Recent Shakespeare Production on Screen. New York: Peter Lang, 2000.
  7. Crowl, Samuel. Shakespeare Observed: Studies in Performance on Stage and Screen. Athens, OH: Ohio UP, 1992.
  8. Greenaway, Peter. Prospero's Books: A Film of Shakespeare's The Tempest. New York: Four Walls Eight Windows, 1991.
  9. Jackson, Russell, ed. The Cambridge Companion to Shakespeare on Film. Cambridge: Cambridge UP, 2000.
  10. Lanier, Douglas. Shakespeare and Modern Popular Culture. Oxford: Oxford UP, 2002.
  11. Mitry, Jean. Semiotics and the Analysis of Film. Bloomington and Indianapolis, IN: Indiana UP, 2000.
  12. Osborne, Laurie E. "Poetry in Motion: Animating Shakespeare." Shakespeare, the Movie: Popularizing the Plays on Film, TV, and Video. Ed. Lynda E. Boose and Richard Burt. London: Routledge, 1997. 103-120.
  13. Stam, Robert. Film Theory: An Introduction. Oxford: Blackwell Publishers, 2000.
  14. Wollen, Peter. Signs and Meaning in the Cinema. London: BFI Publishing, 1998.

# H1063

中国历史上的谣言

Rumors in Chinese History

港澳台办公室 吕宗力

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英汉双语       | 学时 | 32 |

## 课程简介

谣言在古代中国的政治实践和社会生活中曾产生非常重要的影响,但甚少受到中国古代政治史、社会史、思想史主流研究的关注。本课程借鉴跨学科的视角,考察中国政治社会历史脉络中人们对谣言的观念和看法,探讨中国传统政治、社会、文化中谣言的性质和角色。借鉴现代社会学、心理学有关谣言的理论,实事求是地审视、反思中国历史文献中有关谣言的史料,揭示谣言在特定历史语境中的社会、政治、文化意涵,引导学生对传统中国的社会、政治、文化历史作另类观察和思考。

## Course Description

Examine the notion and perception of rumor in Chinese historical sociopolitical context, and explore the nature and role of rumor in traditional Chinese politics, society, and culture. Appropriate sociological and psychological theories on rumor will be consulted. A careful textual and historical exploration of relevant texts and historical episodes will be conducted. The sociopolitical and cultural implications of the rumors in particular contexts will be examined. Provide students with an alternative viewpoint of traditional Chinese social, political and cultural history, which has been long neglected or underestimated by the main stream scholarship of Chinese political, social and intellectual history, yet very influential and significant in Chinese political practice, social life and cultural settings.

## 教学大纲

| 教学内容  | 学时 | 教学方式  | 作业及要求   | 基本要求  | 考查方式  |
|---|----|---|---|---|---|
| 心理学、社会学、认知学、传播学中有关谣言的一些基本理论<br>Theories of sociology, psychology, cognition and mass communication in rumor studies | 8  | 教师讲授与课堂讨论相结合<br>Mixed mode of lecture and seminar | 轮流就每堂课指定的阅读材料作概述和评论<br>Take turns to report their summary and comment on specifically assigned readings | 必须在每堂课前预习指定的阅读材料和积极主动地参与课堂讨论<br>Complete reading of assigned materials before attending classes and participate class discussions | 课堂讨论与阅读报告<br>Class discussion and reading summary and comment |

|   |   |  |   |   |  |
|---|---|--|---|---|--|
| <p>中西史学界有关谣言与历史的经典著述</p> <p>Western and Chinese studies of rumor in history</p>   | 8 | <p>教师讲授与课堂讨论相结合</p> <p>Mixed mode of lecture and seminar</p>       | <p>轮流就每堂课指定的阅读材料作概述和评论</p> <p>Take turns to report their summary and comment on specifically assigned readings</p>                                  | <p>必须在每堂课前预习指定的阅读材料和积极主动地参与课堂讨论</p> <p>Complete reading of assigned materials before attending classes and participate class discussions</p>            | <p>课堂讨论与阅读报告</p> <p>Class discussion and reading summary and comment</p>     |
| <p>中国历代历史文献中记录的谣言案例</p> <p>Rumors recorded in Chinese historical texts</p>  | 8 | <p>教师讲授与学生报告相结合</p> <p>Mixed mode of lecture and seminar.</p>      | <p>学生在课前就指定的史料作检索和初步辨析，简介所选择的历史谣言案例</p> <p>Briefing rumor cases selected from assigned historical texts</p>   | <p>课前完成史料检索和辨析</p> <p>Complete investigation and primary analysis of rumor cases selected from assigned historical texts before attending the class</p> | <p>历史案例简介</p> <p>Briefing of historical cases</p>                            |
| <p>在特定历史语境中探讨中国历史上一些谣言的社会、政治、文化意义：谣言与舆论；谣言的形成、传播和沟通过程；历代政权对谣言的回应、控制方式及其成效</p> <p>Sociopolitical and cultural roles of rumors in particular historical contexts; Rumor and public opinion; Forming, spreading and communicating of rumors; The ways the state dealt with rumors and their consequences</p> | 8 | <p>教师讲授与学生报告、课堂讨论相结合</p> <p>Mixed mode of lecture and seminar.</p> | <p>就所撰学期报告向全班作口头报告，并接受教师和同学的质疑</p> <p>Students present her/his term papers orally to entire class and answer questions raised from the audience</p> | <p>课前完成期末报告初稿</p> <p>Complete the drafting of term paper before attending the class</p>   | <p>课堂讨论与期末口头报告、书面报告</p> <p>Class discussions, oral report and term paper</p> |

## 考核方式

出席率、课堂讨论总体表现占 15%；就指定阅读材料所作概述和评论占 15%；期末口头报告占 25%；期末报告占 45%。

Attendance and overall performance in classroom discussions: 10%; Summarizing and commenting on assigned reading materials: 10%; Final oral presentation: 20%; Term paper: 60%.

## 参考资料

English:

1. Allport, Gordon W. and Leo Postman. *The Psychology of Rumor*. Reissued. New York: Russell & Russell, INC., 1965.
2. Borden, Diane, and Kerric Harvey, ed. *The Electronic Grapevine: Rumor, Reputation, and Reporting in the New On-Line Environment*. Mahwah: Lawrence Erlbaum Associates, Publisher, 1998.
3. Bronner, Stephen Eric. *A Rumor about the Jews: Reflections on Antisemitism and the Protocols of the Learned Elders of Zion*. New York: St. Martin's Press, 2000.
4. Cho, Hyunyi: "Public Opinion as Personal Cultivation: A Normative Notion and a Source of Social Control in Traditional China." *International Journal of Public Opinion Research*(2000) 12.3: 299-323.
5. Farge, Arlette, and Jacques Revel. *The Vanishing Children of Paris: Rumor and Politics before the French Revolution*. Cambridge: Harvard University Press, 1991.
6. Knopf, Terry Ann. *Rumors, Race, and Riots*. New Brunswick: Transaction Books, 1975.
7. Matthews, George Tennyson. *News and Rumor in Renaissance Europe: the Fugger Newsletters*. New York: Capricorn Books, 1959.
8. Ono, Shinji, "A Deliberate rumor: national anxiety in China on the eve of the Xinhai Revolution." In *China's Republican Revolution*, ed. By EtoShinkichi and Harold Z. Schiffrin. Tokyo: University of Tokyo Press, 1994, 25-40.
9. Rosnow, Ralph L., and Gary Alan Fine. *Rumor and Gossip: the Social Psychology of Hearsay*. New York: Elsevier, 1976.
10. Shibutani, Tamotsu. *Improvised News: A Sociological Study of Rumor*. Indianapolis: The Bobbs-Merrill Company, 1966.
11. White, Luise. *Speaking With Vampires: Rumor and History in Colonial Africa*. Berkeley: University of California Press, 2000.

中文:

1. 陈雪屏《谣言的心理》。长沙艺文丛书编辑部，1939。
2. 加里·艾伦·法恩着，艾彦译《流言、信任和公民社会：集体记忆和有关判断的各种文化》。《第欧根尼》2007.2:53-72。
3. 江万秀等《谣言透视》。北京：群众出版社，1991。
4. 卡普费雷（Jean-Noël Kapferer）着，郑若麟、边芹译《谣言：世界最古老的传媒》。上海：上海人民出版社，1991。
5. 柯文（Paul A. Cohen）着，杜继东译《历史三调：作为事件、经历和神话的义和团》。南京：江苏人民出版社，2000。
6. 孔飞力（Philip A. Kuhn）着，陈兼、刘昶译《叫魂：1768年中国妖术大恐慌》。上海：三联书店，1999。
7. 胡翼青《流言传播背后的结构性因素》。《新闻与传播研究》2008.3: 44-49。

8. 胡泳《谣言作为一种社会抗议》。《传播与社会学刊》2009.9: 67-94。
9. 尼古拉斯·迪方佐和普拉尚·博尔迪亚着, 艾彦译《流言、传言和都市传说》。《第欧根尼》2008.1: 49-73。
10. 李传军《汉代的社会谣言和谣言控制》。《青岛大学师范学院学报》2011.2: 73-79。
11. 李建华《明成化年间的妖异事件》。《宁夏师范学院学报》2009.2: 54-59。
12. 李若建《虚实之间: 20世纪50年代中国大陆谣言研究》。北京: 社会科学文献出版社, 2011。
13. 刘文江《作为实践性体裁的传说、都市传说与谣言研究》。《民俗研究》2012.2:136-142。
14. 吕宗力《汉代的谣言》。杭州: 浙江大学出版社, 2011。
15. 诺伊鲍尔(Hans-JoachimNeubauer)着, 顾牧译《谣言女神》。北京: 中信出版社, 2004。
16. 邵建《近代上海反教谣言的消解》。《社会科学》2005.10: 104-110。
17. 施爱东《灾难谣言的形态学分析—以5.12汶川地震的灾后谣言为例》。《文化研究》2008.4: 28-45。
18. 苏萍《谣言与近代教案》。上海远东出版社, 2001。
19. 吴凤玲《谣言与卷入恐慌事件的人们—对发生在一个北方小城的三个事件的人类学分析》。《民间文化论坛》2005.5: 56-60。
20. 夏明钊《谣言这东西》。深圳: 海天出版社, 1999。
21. 谢贵安《从谣言到预言: 流传千年的中国谶谣文化》。/台北: 未来书城, 2003。
22. 杨慧琼《解析我国地震谣言报导的公共性—以2010年四个地震谣言传播过程为例》。《福建师范大学学报》2011.1: 160-164。
23. 张铁民《谣言和流言: 错位的心态》。南京市: 江苏教育出版社, 1997。
24. 赵凯《汉代官方舆论收集机制》。《南都学坛》2006.5: 1-5。
25. 周晓虹《传播的畸变-对SARS传言的一种社会心理学分析》。《社会学研究》2003.6: 43-54。
26. 二十四史(北京中华书局版)
27. 历代野史与笔记

# H1064

历史与比较视野下的中国不平等：

基于 1700 年代以来的大数据的新认识

Inequality in China in Historical and Comparative Perspectives: New Insights from Big Data 1700-2000

港澳台办公室 李中清、谢晓辉

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

本课程基于对不同类型的历史及现当代大数据的构建与分析，在比较的视野下对中国历史上和社会中的不平等问题进行全新的思考。我们鼓励学生通过比较的视野来研究中国，同时鼓励学生区分认知与思考二者的差别，例如区别基于理论与价值的事实的不同。本课程鼓励学生通过对多个大数据的具体分析，探索过去三个世纪中教育与社会流动，财富积累与分配，以及政治成败的不平等模式。

本教学方式的主要优势在于不仅可以通过定量研究来进行过去与当代中国的纵向比较研究，同时也形成对包括美、法、英等西方社会的横向比较研究。在人文社科的研究与教学中，师生都会运用比较的方法，但往往较模糊与抽象。本课程定量研究的方法提供了清晰及确切的对比研究，在不平等问题上，对固有的民族中心、欧洲中心、以及当代中心的认知提出全新的挑战。

本课程采用“翻转课堂”的课堂运作模式，要求学生在上课前已经观看了课程录像和相关的参考文献，并且完成指定的课程作业。然后，充分利用课堂的时间进行个人或者小组的报告与讨论，以深化对该议题的理解。

## Course Description

This course summarizes some of the new understandings of comparative inequality in Chinese history and Chinese social science produced by the construction and analysis of different kinds of large historical and contemporary datasets. We organize this knowledge in a framework that both encourages learning about China in comparative perspective, and differentiates knowing from thinking, i.e. facts from theory and values. The course takes an analytic approach by focusing on specific datasets, and explores what these datasets can teach us about patterns of inequality in education and social mobility, the accumulation and distribution of wealth, and political winners and losers during the last three centuries.

The advantage of such an approach to the teaching of China is that the focus on quantitative measures and models allows the course to compare Chinese past and present experiences with each other as well as with such other societies as the USA, France, and the United Kingdom. All students and teachers are implicitly comparative when studying and teaching humanities and social sciences. The quantitative method allows this course to make such comparisons explicitly and through such explicit comparisons to challenge the ethnocentric, Eurocentric and present-centric flavor of much academic research on inequality.



We use a flipped classroom approach and require students to watch class lectures outside the classroom before class meetings and to use in-class time instead for active learning through individual and group presentations and discussion.

## 教学大纲

| 教学内容  | 学时 | 教学方式                               | 作业及要求   |
|---|----|------------------------------------|---|
| Introduction and conceptual discussion<br>导言：基本概念、方法与框架           | 4  | flipped classroom<br>“翻转课堂”的课堂教学模式 | Watch class lecture video before class meeting<br>Read Lecture 1 readings before class meeting<br>课前观看课程录像<br>阅读本章的参考文献   |
| Education and Social Mobility in the Past<br>历史上的教育与社会流动          | 8  | flipped classroom<br>“翻转课堂”的课堂教学模式 | Watch class lecture video before class meeting<br>Read Lecture 2 & 3 readings before class meeting<br>Present the assignment and participate in class discussion<br>课前观看课程录像<br>阅读本章参考文献<br>参与课堂报告及讨论   |
| Education and Social Mobility in the Present<br>当代的教育与社会流动        | 4  | flipped classroom<br>“翻转课堂”的课堂教学模式 | Watch class lecture video before class meeting<br>Read Lecture 4 readings before class meeting<br>Present the assignment and participate in class discussion<br>课前观看课程录像<br>阅读本章参考文献<br>参与课堂报告及讨论   |
| Wealth Accumulation and Distribution in the Past<br>历史上的财富累积与分配   | 8  | flipped classroom<br>“翻转课堂”的课堂教学模式 | Watch class lecture video before class meeting<br>Read Lecture 5 & 6 readings before class meeting<br>Present the assignment and participate class discussion<br>Prepare for research proposal<br>课前观看课程录像<br>阅读本章参考文献<br>参与课堂报告及讨论<br>准备课程研究计划 |
| Wealth Accumulation and Distribution in the Present<br>当代的财富累积与分配 | 8  | flipped classroom<br>“翻转课堂”的课堂教学模式 | Watch class lecture video before class meeting<br>Read Lecture 7&8 readings before class meeting<br>Present the assignment and research essay, and participate class discussion<br>课前观看课程录像<br>阅读本章参考文献<br>参与课堂报告及讨论<br>报告课程论文                  |

## 考核方式

1. Watch weekly video lecture
  2. 7 class presentations (7 X 5 percent of course grade)
  3. 5-page research essay (50 percent of course grade)
  4. Class participation (15 percent of course grade)
1. 学生要求课程观看课程录像
  2. 参与课堂报告 (7×5, 35%)
  3. 5 页的研究论文 (50%)
  4. 参与课堂讨论 (15%)

## 参考资料

### Reading Schedule

#### Introduction and conceptual discussion

#### Lecture 1

1. 梁晨, 董浩, 李中清. 2014. 《计量数据库与历史研究》准备投稿至《历史研究》或《中国社会科学》

#### I. Education and Social Mobility in the Past

#### Lecture 2

1. Campbell, Cameron and James Z. Lee. 2011. "Kinship and the Long-Term Persistence of Inequality in Liaoning, China, 1749-2005." *Chinese Sociological Review*. 44(1):71-104.
2. HO, Ping-ti. 1964. *The Ladder of Success in Imperial China; Aspects of Social Mobility, 1368-1911*. Columbia University Press: 1-52, 92-167.
3. JIANG, Qin. 2012. *Essays on Social Mobility in Late Imperial China: Attainments in Civil Exams and Officials' Career Mobility*. HKUST Social Science PhD Dissertation: 19-31.
4. 2013 PPT file by 徐泓 on the Ming Dynasty Ladder of Success.

#### II. Education and Social Mobility in the Present

#### Lecture3

1. 梁晨, 张浩, 李兰, 阮丹青, 康文林, 李中清. 2013. 《无声的革命: 北京大学, 苏州大学学生社会来源研究, 1949-2002》. 北京三联出版社.

#### Lecture4

1. 2014 PPT slides by Lee, James Z., Chen Liang, Hongbo Wang, Matthew Noellert, Limin Liu, and Cameron Campbell. "Changes in the Social Origins of China's Educated Elite, 1865-2014."
2. BOURDIEU, Pierre. 1996. *The State Nobility: Elite Schools in the Field of Power*. Polity Press: 9-29, 263-299.
3. KARABEL, Jerome. 2005. *The Chosen: The Hidden History of Admission and Exclusion at Harvard, Yale, and Princeton*. Houghton Mifflin: 1-5.
4. RUBENSTEIN, William D. 2009. "The social origins and career patterns of Oxford and Cambridge matriculants, 1840-1900." *Historical Research*, vol. 82, no. 218 (November 2009): 715-730.
5. SMITH, Robert J. 1982. *The ecolenormalesupérieure and the Third Republic*. Suny Press, Table 4, p.34.
6. WEBER, Max. 1946. 'The Chinese Literati.' In *From Max Weber: Essays in Sociology*. Oxford

University Press: 416-444, 462-467.

### III. Wealth Accumulation and Distribution in the Past

#### Lecture 5

1. CHEN, Shuang. 2014. Social Formation under State Domination: State Categories and Wealth Stratification in Northeast China, 1815-1913. Book Manuscript: 1-31.
2. LINDERT, Peter H. 1991. 'Toward a Comparative History of Income and Wealth Inequality.' in Income Distribution in Historical Perspective. Cambridge University Press: 212-231.

### IV. Wealth Accumulation and Distribution in the Present

#### Lecture 6

1. 托马斯·皮凯蒂著，巴曙松、陈剑等译，2014，《21世纪资本论》，中信出版社。

#### Lecture 7

1. HINTON, William. 1966. Fanshen: A Documentary of Revolution in a Chinese Village. Monthly Review Press: 147-156, 332-366.
2. NOELLERT, Matthew. 2014. "New Perspectives on Communist Land Reform: Evidence from Northeast China, 1946-1948." HKUST Humanities PhD Dissertation.

#### Lecture 8

1. 2014 PPT Slides on Wealth Inequality in Rural China During Collectivization, 1945-1966 by XING Long, HU Yingze, Matthew Noellert, Cameron Campbell, James Lee.
2. 2013 PPT Slides on Wealth Inequality in Contemporary Urban China, 2010-2012 by GAN Li and TAN Jijun, LI Shi and WAN Haiyuan, and ALBERT PARK and SHEN Yan.

# PH034

物理异想  
Physics from Different Perspectives

慕课研究院 李威仪

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 中文         | 学时 | 32 |

## 课程简介

这门课希望从迥异于传统物理教学的几个不同观点来了解与物理发展息息相关的人、事、物，让非理工科的学生能以更轻松的方式认识物理的重要发展及观念，让理工科的学生看到更多物理有趣及有用的面向。

第一部分：从历史发展来看物理，主要将介绍牛顿前的物理思潮变化过程；

第二部分：从电影看物理，藉由探讨电影中经常出现的一些情节介绍及讨论古典物理中一些重要的观念；

第三部分：从女性的观点看物理，则是透过物理发展史上几位重要女性的贡献或委屈引出近代物理的一些重要发展

第四部份：从小伙子的观点看物理，将探讨为啥二十世纪发展的量子力学是年轻人的天下；

第五部分：从现代科技看物理，将讨论现代科技与量子力学的发展如何相互为用。

本课程授课方式将以教授讲授为主。

## Course Description

There are mainly five parts in this course :

- I. Physics from the perspective of history development;
- II. Physics from the perspectives of movie lovers
- III. Physics from the perspectives of women
- IV. Physics from the perspectives of young "kids"
- V. Physics from the perspectives of modern technologies

## 教学大纲

| 教学内容     | 学时 | 教学方式    | 作业及要求 | 基本要求 | 考查方式 |
|----------|----|---------|-------|------|------|
| 从梵谷说起    | 4  | 授课      |       |      | 测验   |
| 牛顿来了以后   | 4  | 授课 / 视频 |       |      | 大作业  |
| 无所不在的波   | 4  | 视频 / 讨论 |       |      | 测验   |
| 二十世纪初的启示 | 4  | 授课 / 视频 |       |      | 大作业  |
| 原子的秘密    | 4  | 授课 / 讨论 |       |      | 测验   |

|           |   |         |  |  |     |
|-----------|---|---------|--|--|-----|
| 到底是粒子还是波动 | 4 | 授课 / 视频 |  |  | 大作业 |
| 聚沙成塔以后    | 4 | 授课 / 讨论 |  |  | 测验  |

### 考核方式

测验 3 次（15%）+ 课程讨论 4 次（35%）+ 期末考试（50%）

### 参考资料

无

# AU003

系统仿真与控制

Simulation and Control of Dynamic Systems

航空航天学院 陆蓓

|      |            |    |    |
|------|------------|----|----|
| 课程性质 | 海外学者课程(公选) | 学分 | 2  |
| 授课语言 | 英语         | 学时 | 32 |

## 课程简介

本课程将以航空航天、机械、电子工程中的典型动力学系统为例，主要内容分为两大部分：第一部分是系统建模和仿真，介绍如何用数学表达式和框图表示常见的动力学系统，以及如何用计算机软件 MATLAB 进行简单的系统仿真和动态特性分析。第二部分是控制理论和设计，介绍反馈控制的概念，工业上广泛应用的控制器设计方法，以及如何用 MATLAB 进行计算机辅助控制器设计。

## Course Description

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.

## 教学大纲

| 教学内容             | 学时 | 教学方式           | 作业及要求 | 基本要求 | 考查方式                |
|------------------|----|----------------|-------|------|---------------------|
| 控制系统的简介及在不同领域的应用 | 4  | 课堂讲授、课堂讨论      |       |      | 平时作业、课堂测验、结业考试      |
| 简单动力学系统的建模与仿真    | 12 | 课堂讲授、课堂讨论、实验上机 |       |      | 平时作业、课堂测验、小组作业、结业考试 |
| 简单控制器的设计         | 12 | 课堂讲授、课堂讨论、实验上机 |       |      | 平时作业、课堂测验、小组作业、结业考试 |
| 基本控制软硬件的实现       | 4  | 课堂讲授、课堂讨论、实验上机 |       |      | 平时作业、课堂测验、小组作业      |

## 考核方式

最终成绩由平时作业、课堂测验、小组作业、结业考试成绩组合而成，要求英文完成。考核各部分所占比例如下：  
平时作业：10% 主要训练对知识点的理解及应用。  
课堂测验：10% 主要考核对核心知识点的掌握程度。

小组作业: 40% 主要训练分析解决问题, 创造性思维, 口头及文字表达能力。  
考试: 40% (教学周为 4 周, 可安排两次考试, 各占 20%)。主要考核对动力力学系统的建模及分析、控制理论及设计的掌握程度。

## 参考资料

教学参考书:

1. Modeling and Analysis of Dynamic Systems, R.S. Eshfandiari and B. Lu, 2nd ed., CRC Press, 2014.
2. Feedback Control of Dynamic Systems, G.F. Franklin, J.D. Powell, and A. Emami-Naeini, Prentice-Hall, 2009.
3. Modern Control Engineering, K. Ogata, Prentice-Hall, 2009.

推荐以下内容:

教学参考网站: <http://ctms.engin.umich.edu/CTMS/>, Control Tutorials for MATLAB & SIMULINK.