

## 2023年暑期学校课程信息

(共136门课, 157门次)

\*类型为A类课程、国际课程不对校外开放。

\*类型为B、C类课程对校外开放。

\*7月3日(周一)课程统一调至7月8日(周六)上课。

| 序号 | 课程号      | 课程名称                             | 英文名  | 开课系所      | 班号 | 学分 | 授课教师                 | 备注                  | 类型 |
|----|----------|----------------------------------|--|-----------|----|----|----------------------|---------------------|----|
| 1  | 00332950 | <a href="#">航空航天工业实习</a>         | Aerospace Industry Intern Program                        | 工学院       | 1  | 3  | 周超                   |                     | A  |
| 2  | 00333106 | <a href="#">智能制造与服务系统</a>        | Intelligent Manufacturing and Service Systems            | 工学院       | 1  | 3  | Andrew KUSIAK(校外)    | Globex国际暑期项目        | A  |
| 3  | 00333109 | <a href="#">可持续性理论与实践</a>        | Sustainability Theory and Practices                      | 工学院       | 1  | 3  | Tracy Cui(校外)        | Globex国际暑期项目        | A  |
| 4  | 00333145 | <a href="#">优化和学习的模拟方法</a>       | Simulation Methods for Optimization and Learning         | 工学院       | 1  | 3  | Bernd HEIDERGOTT(校外) | Globex国际暑期项目        | A  |
| 5  | 00333181 | <a href="#">工程项目管理中的金融决策</a>     | Financial Decisions in Engineering Project Management    | 工学院       | 1  | 3  | Daricha Sutivong(校外) | Globex国际暑期项目        | A  |
| 6  | 00333390 | <a href="#">生物医学工程实习</a>         | Biomedical Engineering Practice                          | 工学院       | 1  | 3  | 孙红芳                  |                     | A  |
| 7  | 00333670 | <a href="#">中国经济: 科技、增长与全球联系</a> | China Economy: Technology, Growth and Global Connections | 工学院       | 1  | 3  | Susan Mays(校外)       | Globex国际暑期项目        | A  |
| 8  | 00333724 | <a href="#">中华语言文化</a>           | Chinese Language and Culture                             | 工学院       | 1  | 3  | ZHANG Aidong(校外)     | Globex国际暑期项目        | A  |
| 9  | 00334241 | <a href="#">机器学习算法: 从数学到代码</a>   | Machine Learning Algorithms: From Math to Code           | 工学院       | 1  | 3  | WANG Ruye(校外)        | Globex国际暑期项目        | A  |
| 10 | 00432206 | <a href="#">量子力学专题</a>           | Advanced topics in Quantum Mechanics                     | 物理学院      | 1  | 2  | B. Rosenstein(校外)    | 1-3周每天授课, 第4周仅周一授课。 | B  |
| 11 | 00432216 | <a href="#">量子力学(II)</a>         | Quantum Mechanics (II)                                   | 物理学院      | 1  | 2  | 钱志新                  | 第5周周一下午考试。          | B  |
| 12 | 00437151 | <a href="#">物理学科暑期专题研讨</a>       | Selected Topics on Physics                               | 物理学院      | 1  | 2  | 闻新宇                  | 7月10-14日全天1-8节      | B  |
| 13 | 01035280 | <a href="#">化工新概念</a>            | New concept of modern chemical industry                  | 化学与分子工程学院 | 1  | 1  | 马莲(校外)               |                     | A  |

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|----|----------|-----------------------------|--|-----------|----|----|---|---------------------------|----|
| 14 | 01035430 | <a href="#">化学应用与实践</a>     | Application and Practice of Chemistry            | 化学与分子工程学院 | 1  | 1  | 王颖霞, 高珍, 吕占霞, 马锴果, 黄军, 徐金荣, 杨玲, 王岩, 徐烜峰 |                           | A  |
| 15 | 01130912 | <a href="#">南海海洋生态学野外实践</a> | Marine Ecology Field Practice of South China Sea | 生命科学学院    | 1  | 2  | 顾红雅, 饶广远, 贺新强, 李大建, 王戎疆, 龙玉, 孟世勇, 李晟    |                           | A  |
| 16 | 01131435 | <a href="#">植物细胞发育</a>      | Plant Cell Development                           | 生命科学学院    | 1  | 2  | 瞿礼嘉, Juan Dong (校外)                     | 8月3日-8月15日上课, 8月15日3-4节考核 | A  |
| 17 | 01132685 | <a href="#">衰老生物学</a>       | Biology of aging                                 | 生命科学学院    | 1  | 2  | 陶伟                                      | 7月1日-7月15日                | A  |
| 18 | 01133036 | <a href="#">生命的逻辑</a>       | The logic of life                                | 生命科学学院    | 1  | 2  | 白书农                                     | 7月3日-7月19日                | B  |
| 19 | 01133125 | <a href="#">古代DNA与人类演化</a>  | Ancient DNA and human evolution                  | 生命科学学院    | 1  | 2  | 遇赫                                      | 7月24日-8月3日, 每周一至周四, 5-8节  | A  |
| 20 | 01134110 | <a href="#">生态学野外实践</a>     | Field Practice of Forest and Wildlife Ecology    | 生命科学学院    | 1  | 2  | 贺新强, 王戎疆                                | 8月22日-9月3日1-12节           | A  |
| 21 | 01134140 | <a href="#">生物学综合野外实习</a>   | Field Practice of Biology                        | 生命科学学院    | 1  | 2  | 饶广远, 李大建, 王戎疆                           | 8月22日-9月3日1-12节           | A  |
| 22 | 01134140 | <a href="#">生物学综合野外实习</a>   | Field Practice of Biology                        | 生命科学学院    | 2  | 2  | 顾红雅, 龙玉, 王戎疆                            | 8月22日-9月3日1-12节           | A  |
| 23 | 01134140 | <a href="#">生物学综合野外实习</a>   | Field Practice of Biology                        | 生命科学学院    | 3  | 2  | 李晟, 孟世勇, 王戎疆                            | 8月22日-9月3日1-12节           | A  |
| 24 | 01134140 | <a href="#">生物学综合野外实习</a>   | Field Practice of Biology                        | 生命科学学院    | 4  | 2  | 饶广远, 李大建, 王戎疆, 顾红雅                      | 8月12日-8月20日1-12节          | A  |
| 25 | 01134140 | <a href="#">生物学综合野外实习</a>   | Field Practice of Biology                        | 生命科学学院    | 5  | 2  | 贺新强, 龙玉, 李晟, 孟世勇, 王戎疆                   | 8月12日到20日1-12节            | A  |
| 26 | 01139632 | <a href="#">生物化学实验</a>      | Biochemistry Lab                                 | 生命科学学院    | 1  | 2  | 王青松, 刘旖璇                                |                           | A  |
| 27 | 01230450 | <a href="#">虚拟现实内容创作</a>    | Virtual Reality Content Creation                 | 地球与空间科学学院 | 1  | 2  | 陈斌                                      |                           | B  |

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|----|----------|--------------------------------|---|-----------|----|----|------|-------------------------------|----|
| 28 | 01230470 | <a href="#">北斗系统与时空智能</a>      | BDS-based<br>Spatiotemporal<br>Intelligence             | 地球与空间科学学院 | 1  | 2  | 陈秀万  |                               | B  |
| 29 | 01231440 | <a href="#">区域地质实习</a>         | Excursion for<br>Regional Geology                       | 地球与空间科学学院 | 1  | 2  | 季建清  |                               | A  |
| 30 | 01231640 | <a href="#">普通地质实习A</a>        | Introduction to Field<br>Geology                        | 地球与空间科学学院 | 1  | 2  | 张志诚  |                               | A  |
| 31 | 01231641 | <a href="#">普通地质实习A讨论班</a>     | Seminar on field<br>geology                             | 地球与空间科学学院 | 1  | 0  | 张志诚  |                               | A  |
| 32 | 01231641 | <a href="#">普通地质实习A讨论班</a>     | Seminar on field<br>geology                             | 地球与空间科学学院 | 2  | 0  | 朱永峰  |                               | A  |
| 33 | 01231641 | <a href="#">普通地质实习A讨论班</a>     | Seminar on field<br>geology                             | 地球与空间科学学院 | 3  | 0  | 黄宝春  |                               | A  |
| 34 | 01231641 | <a href="#">普通地质实习A讨论班</a>     | Seminar on field<br>geology                             | 地球与空间科学学院 | 4  | 0  | 董琳   |                               | A  |
| 35 | 01231641 | <a href="#">普通地质实习A讨论班</a>     | Seminar on field<br>geology                             | 地球与空间科学学院 | 5  | 0  | 张元元  |                               | A  |
| 36 | 01231912 | <a href="#">五台山地区综合地质实习</a>    | Geology Excursions in<br>the Wutai Region               | 地球与空间科学学院 | 1  | 2  | 张波   |                               | A  |
| 37 | 01231916 | <a href="#">五台山地区综合地质实习讨论班</a> | Geology Excursions in<br>the Wutai Region               | 地球与空间科学学院 | 1  | 0  | 张波   |                               | A  |
| 38 | 01231916 | <a href="#">五台山地区综合地质实习讨论班</a> | Geology Excursions in<br>the Wutai Region               | 地球与空间科学学院 | 2  | 0  | 魏春景  |                               | A  |
| 39 | 01231916 | <a href="#">五台山地区综合地质实习讨论班</a> | Geology Excursions in<br>the Wutai Region               | 地球与空间科学学院 | 3  | 0  | 张进江  |                               | A  |
| 40 | 01231916 | <a href="#">五台山地区综合地质实习讨论班</a> | Geology Excursions in<br>the Wutai Region               | 地球与空间科学学院 | 4  | 0  | 张贵宾  |                               | A  |
| 41 | 01231916 | <a href="#">五台山地区综合地质实习讨论班</a> | Geology Excursions in<br>the Wutai Region               | 地球与空间科学学院 | 5  | 0  | 李秋根  |                               | A  |
| 42 | 01233170 | <a href="#">地震概论</a>           | Introduction to<br>Seismology                           | 地球与空间科学学院 | 1  | 2  | 赵克常  | 第四周最后一节课安排考试                  | B  |
| 43 | 01233660 | <a href="#">地球物理野外实习</a>       | Geophysical Field<br>Practice                           | 地球与空间科学学院 | 1  | 2  | 宁杰远  |                               | A  |
| 44 | 01235260 | <a href="#">3S野外综合实习</a>       | Practice on RS, GIS<br>and GPS                          | 地球与空间科学学院 | 1  | 1  | 田原   |                               | A  |
| 45 | 01533300 | <a href="#">城乡地域空间认知实习</a>     | Regional Science:<br>Practice of Theories<br>and Models | 城市与环境学院   | 1  | 1  | 阴劼   | 20级21级合上, 计划7月5日-11日, 以具体通知为准 | A  |

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|----|----------|-----------------------------|---|-----------|----|----|--------------|--------------------------------|------|
| 46 | 01535130 | <a href="#">野外生态学</a>       | Field Ecology                               | 城市与环境学院   | 1  | 2  | 朱彪, 唐志尧, 吉成均 | 20级21级合上, 预计7月10日-20日, 以具体通知为准 | A    |
| 47 | 01536840 | <a href="#">环境科学野外综合实习</a>  | Field Practice of Environmental Sciences    | 城市与环境学院   | 1  | 1  | 李喜青          | 计划6月28日-7月9日, 具体以通知为准          | A    |
| 48 | 01537530 | <a href="#">普通地质实习</a>      | Field Practice of Physical Geology          | 城市与环境学院   | 1  | 1  | 张家富          | 计划7月19日-23日, 以具体通知为准           | A    |
| 49 | 01539340 | <a href="#">地貌实习</a>        | Field Practice of Geomorphology             | 城市与环境学院   | 1  | 2  | 张家富          | 计划7月4日—18日, 以具体通知为准            | A    |
| 50 | 01630081 | <a href="#">健康人格心理学</a>     | Psychology of Healthy Personality           | 心理与认知科学学院 | 1  | 2  | 杨眉(校外)       |                                | A    |
| 51 | 01630713 | <a href="#">时间与认知</a>       | Time and Cognition                          | 心理与认知科学学院 | 1  | 2  | 包燕           | 讨论教室, 英文授课, 要求先修统计类课程          | B    |
| 52 | 01630725 | <a href="#">系统论与系统式心理治疗</a> | Systems Theory and Systematic Psychotherapy | 心理与认知科学学院 | 1  | 2  | 李松蔚(校外)      |                                | A    |
| 53 | 01831990 | <a href="#">跨文化交流学</a>      | Inter-cultural Communication                | 新闻与传播学院   | 1  | 2  | 李臻怡(校外), 许静  | 线上授课北大教学网class-in              | B    |
| 54 | 01832150 | <a href="#">媒体与国际关系</a>     | Media and International Relations           | 新闻与传播学院   | 1  | 2  | 陈开和          |                                | B    |
| 55 | 01832910 | <a href="#">视频编辑</a>        | Video Editing                               | 新闻与传播学院   | 1  | 2  | 严富昌          | 授课地点: 新闻学院楼522机房               | B    |
| 56 | 01834110 | <a href="#">数据新闻</a>        | Data Journalism                             | 新闻与传播学院   | 1  | 2  | 许静, 叶韦明      |                                | B    |
| 57 | 01834300 | <a href="#">媒体与中国社会</a>     | Media and Society in China                  | 教务部       | 1  | 3  | 陈开和          |                                | 国际课程 |

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|----|----------|-----------------|--|---------|----|----|------------|----------------------------------|------|
| 58 | 01834310 | 宏观经济报道: 理论与新闻评论 | Macroeconomic Reporting: Theory, Issues and Opinion Pieces | 新闻与传播学院 | 1  | 2  | 俞虹, 陈晋(校外) |                                  | B    |
| 59 | 01834343 | 中国媒体市场与媒体战略     | Media Market and Media Strategy in China                   | 教务部     | 1  | 2  | 王天夫        |                                  | 国际课程 |
| 60 | 02031540 | 中国古代文化          | Ancient Chinese Culture                                    | 教务部     | 1  | 2  | 廖可斌        | 7月3日至14日, 每周一、二、四、五, 每日第3-4、7-8节 | B    |
| 61 | 02034960 | 经学通论            | General Theory of Classical Confucianism                   | 中国语言文学系 | 1  | 2  | 顾永新        |                                  | B    |
| 62 | 02131400 | 埃及学专题           | Introduction to Egyptology                                 | 历史学系    | 1  | 2  | 颜海英, 薛江    | 闭卷考试与课堂作业各占50%                   | B    |
| 63 | 02333233 | 《周易本义》精读        | In-depth Reading of ZhouYiBenYi                            | 教务部     | 1  | 2  | 王鑫         | 7月10日至20日, 每周一、二、三、四, 每日第5-8节    | B    |
| 64 | 02432090 | 本土视野下的中国外交与国际事务 | Chinese Perspective on International and Global Affairs    | 教务部     | 1  | 3  | 陈长伟        |                                  | 国际课程 |
| 65 | 02432140 | 中国政治与公共政策       | Chinese Politics and Public Policy                         | 教务部     | 1  | 3  | 雷少华        |                                  | 国际课程 |
| 66 | 02532600 | 经济学原理           | Principle of Economics                                     | 经济学院    | 1  | 3  | 张元鹏        | 非专业、非通选, 7.30上午考试, 经院学生不可选       | B    |
| 67 | 02533710 | 会计学原理           | Principle of Accounting                                    | 经济学院    | 1  | 3  | 张元鹏        | 7.30下午考试                         | B    |
| 68 | 02534380 | 应用经济计量          | Applied Econometrics                                       | 教务部     | 1  | 2  | 秦雪征        |                                  | 国际课程 |
| 69 | 02535030 | 企业全面风险管理        | Enterprise Risk Management                                 | 教务部     | 1  | 2  | 陈凯         | 线上教学                             | 国际课程 |
| 70 | 02535510 | 新结构智库实践         | NSE Academic Think Tank Practice                           | 经济学院    | 1  | 3  | 赵秋运, 于佳    | 22级林班学生                          | A    |

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|----|----------|---------------------------------------|---|---------|----|----|-----------------------------------|--------------------------------|------|
| 71 | 02535620 | <a href="#">“一带一路”和新结构经济学视角下的国际实践</a> | International Practice from the Perspective of the New Structural Economics | 教务部     | 1  | 3  | 于佳                                |                                | 国际课程 |
| 72 | 03033940 | <a href="#">数据可视化</a>                 | Data Visualization  | 信息管理系   | 1  | 2  | 步一                                |                                | B    |
| 73 | 03132520 | <a href="#">田野调查实践</a>                | Social Study Practicum  | 社会学系    | 1  | 3  | 卢晖临, 刘爱玉                          |                                | A    |
| 74 | 03132520 | <a href="#">田野调查实践</a>                | Social Study Practicum  | 社会学系    | 2  | 3  | 刘能, 熊跃根                           |                                | A    |
| 75 | 03132550 | <a href="#">社会调查实践</a>                | Practise  | 社会学系    | 1  | 4  | 范新光                               | 限社会学系2020级本科生选课。               | A    |
| 76 | 03139110 | <a href="#">死亡的社会学思考</a>              | Sociological Perspectives of Dying and Death                                | 教务部     | 1  | 2  | 陆杰华                               | 7月17日至28日, 每周一、二、四、五, 每日第1-4节。 | B    |
| 77 | 03631990 | <a href="#">速成法语(零起点)</a>             | French for Reading from scratch   | 外国语学院   | 1  | 2  | 孙凯                                |                                | B    |
| 78 | 03633331 | <a href="#">西班牙语及西班牙文化</a>            | Introduction to the Spanish Language and Culture                            | 外国语学院   | 1  | 2  | 宋扬                                |                                | B    |
| 79 | 03636900 | <a href="#">意大利语言和文化</a>              | Italian Language and Culture  | 外国语学院   | 1  | 2  | GUIMMARRA GIUSEPPINA(校外), 成沫, 常无名 | 7月3日(星期一)不上课                   | B    |
| 80 | 03835620 | <a href="#">美国华人移民的历史与文化</a>          | History and Culture of Chinese Immigrants in America                        | 英语语言文学系 | 1  | 2  | Tian Xiaofeng(校外)                 |                                | C    |
| 81 | 03835620 | <a href="#">美国华人移民的历史与文化</a>          | History and Culture of Chinese Immigrants in America                        | 英语语言文学系 | 2  | 2  | Tian Xiaofeng(校外)                 |                                | C    |
| 82 | 03835983 | <a href="#">世界英语与英语世界</a>             | World Englishes and the English World                                       | 英语语言文学系 | 1  | 2  | 徐志长(校外)                           |                                | C    |
| 83 | 03835988 | <a href="#">文化人类学概论</a>               | Introduction to Cultural Anthropology                                       | 英语语言文学系 | 1  | 2  | 雷静(校外)                            |                                | C    |
| 84 | 04031313 | <a href="#">学年论文(马院)</a>              | Term Thesis   | 马克思主义学院 | 1  | 1  | 宋朝龙                               |                                | A    |
| 85 | 04130030 | <a href="#">太极拳</a>                   | Shadowboxing  | 体育教研部   | 1  | 1  | 玄雨晴(校外)                           |                                | A    |
| 86 | 04130030 | <a href="#">太极拳</a>                   | Shadowboxing  | 体育教研部   | 2  | 1  | 玄雨晴(校外)                           |                                | A    |

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|-----|----------|-----------------|--|----------|----|----|------|--------------------------|------|
| 87  | 04130030 | 太极拳             | Shadowboxing   | 体育教研部    | 3  | 1  | 吴昊   |                          | A    |
| 88  | 04130030 | 太极拳             | Shadowboxing   | 体育教研部    | 4  | 1  | 吴昊   |                          | A    |
| 89  | 04130040 | 健美操             | Aerobics   | 体育教研部    | 1  | 1  | 车磊   |                          | A    |
| 90  | 04130040 | 健美操             | Aerobics   | 体育教研部    | 2  | 1  | 车磊   |                          | A    |
| 91  | 04130126 | 体美              | Physical and Aesthetic course  | 体育教研部    | 1  | 1  | 秦朗   |                          | A    |
| 92  | 04130126 | 体美              | Physical and Aesthetic course  | 体育教研部    | 2  | 1  | 秦朗   |                          | A    |
| 93  | 04130721 | 骑行老北京城：探索千年古都回响 | cycling in ancient Beijing city: Exploring the echo of one-thousand-year old capital | 教务部      | 1  | 2  | 卢福泉  |                          | 国际课程 |
| 94  | 04130721 | 骑行老北京城：探索千年古都回响 | cycling in ancient Beijing city: Exploring the echo of one-thousand-year old capital | 教务部      | 2  | 2  | 卢福泉  |                          | 国际课程 |
| 95  | 04334017 | 美索不达米亚艺术与文明     | Mesopotamian Art and Civilization  | 教务部      | 1  | 2  | 贾妍   | 第一、二周每周一、二、三、四上课，每天第5-8节 | B    |
| 96  | 04830810 | 可编程逻辑电路设计(I)    | Digital Design Using PLD (I)   | 信息科学技术学院 | 1  | 2  | 蒋伟   | 信科实验室                    | A    |
| 97  | 04833310 | 集成电路逻辑综合实验      | logic synthesis labs   | 信息科学技术学院 | 1  | 2  | 贾嵩   | 理科2号楼2623                | B    |
| 98  | 04833720 | 基于IP的SOC设计实验    | SOC design labs  | 信息科学技术学院 | 1  | 2  | 贾嵩   | 理科2号楼2623                | B    |
| 99  | 04833730 | 集成电路的物理设计实验     | Place and route labs   | 信息科学技术学院 | 1  | 2  | 贾嵩   | 理科2号楼2623                | B    |
| 100 | 04834370 | 虚拟现实技术          | Virtual Reality Technology   | 信息科学技术学院 | 1  | 2  | 汪国平  |                          | B    |
| 101 | 04834500 | 量子信息技术概论        | Introduction to Quantum Information Technology                                       | 信息科学技术学院 | 1  | 2  | 吴腾   |                          | B    |
| 102 | 04834710 | 自旋与超导量子技术导论     | Introduction to Spintronic and Superconducting Quantum Technology                    | 信息科学技术学院 | 1  | 2  | 王润声  |                          | B    |

| 序号  | 课程号      | 课程名称                             | 英文名   | 开课系所     | 班号 | 学分 | 授课教师          | 备注                             | 类型 |
|-----|----------|----------------------------------|---|----------|----|----|---------------|--------------------------------|----|
| 103 | 04835270 | <a href="#">自动驾驶技术赏析</a>         | Self-driving Technology Appreciation                    | 信息科学技术学院 | 1  | 2  | 赵卉菁           |                                | B  |
| 104 | 04835280 | <a href="#">纳米离子学控制下的纳米电子学</a>   | Nanoionics controlled nanoelectronics                   | 信息科学技术学院 | 1  | 1  | 杨玉超           | 外专合上                           | A  |
| 105 | 04835290 | <a href="#">模拟集成电路设计方法、工具与流程</a> | Analog Integrated Circuits Design Method、Tools and Flow | 信息科学技术学院 | 1  | 2  | 叶乐            | 与企业专家合上                        | A  |
| 106 | 04835300 | <a href="#">人工智能前沿</a>           | Frontiers of Artificial Intelligence                    | 信息科学技术学院 | 1  | 1  | 王乐业, 董豪, 仇尚航  |                                | A  |
| 107 | 06239083 | <a href="#">经济学社会实践</a>          | Field Work in Economic Study                            | 国家发展研究院  | 1  | 2  | 徐晋涛, 蒋少翔      | 实际实践时间预计从7月4日开始, 两周左右, 详见后续通知。 | A  |
| 108 | 06239139 | <a href="#">量化金融专题</a>           | Topics in Quantitative Finance                          | 国家发展研究院  | 1  | 2  | Tai           |                                | B  |
| 109 | 06732040 | <a href="#">经济学视角下的教育世界</a>      | Economics of Education                                  | 教务部      | 1  | 2  | 马莉萍           | 7月4、6-8、10-11, 13-14日第5-8节     | B  |
| 110 | 06733010 | <a href="#">媒介与教育演变</a>          | Internet: a new communication ecosystem of Education    | 教育学院     | 1  | 2  | 郭文革           |                                | B  |
| 111 | 06733020 | <a href="#">游戏化创新思维</a>          | The innovation thinking of Gamification                 | 教育学院     | 1  | 2  | 尚俊杰           |                                | B  |
| 112 | 12632140 | <a href="#">生态学控制实验野外实习</a>      | Field Experiments in Global Change Ecology              | 城市与环境学院  | 1  | 2  | 贺金生           | 计划8月1日—10日, 具体以通知为准            | A  |
| 113 | 12633070 | <a href="#">自然地理综合实习</a>         | Integrated Practice of Physical Geography               | 城市与环境学院  | 1  | 2  | 蒙古军, 王红亚, 许学工 | 计划7月5日—7月15日, 以具体通知为准          | A  |

| 序号  | 课程号      | 课程名称                          | 英文名  | 开课系所       | 班号 | 学分 | 授课教师                          | 备注   | 类型 |
|-----|----------|-------------------------------|--|------------|----|----|-------------------------------|--|----|
| 114 | 12633130 | <a href="#">陆面过程模型和植被遥感实习</a> | practice of land surface model application and vegetation remote sensing | 城市与环境学院    | 1  | 2  | 朱丹                            | 计划7月31日-8月11日(不含周末), 上午9:00-12:00, 下午1:30-4:00 | A  |
| 115 | 12634070 | <a href="#">“一带一路”综合实习</a>    | "The Belt and Road" Comprehensive Practice                               | 城市与环境学院    | 1  | 2  | 刘鸿雁, 林坚                       | 后续再通知  | A  |
| 116 | 12634080 | <a href="#">人文地理专业综合实习</a>    | Comprehensive Practice of Human Geography                                | 城市与环境学院    | 1  | 1  | 冯健, 曹广忠, 刘宇, 刘刚               | 计划7月4日—10日, 以具体通知为准                            | A  |
| 117 | 12634090 | <a href="#">人文地理综合社会实践实习</a>  | Social and Professional Practice of Human Geography                      | 城市与环境学院    | 1  | 1  | 冯健                            | 具体时间请等通知                                       | A  |
| 118 | 12635390 | <a href="#">美术实习</a>          | Practice of Fine Arts  | 城市与环境学院    | 1  | 2  | 沈文权                           | 计划9月1日-9日, 以具体通知为准                             | A  |
| 119 | 12639010 | <a href="#">综合社会实践实习</a>      | Comprehensive Social Practice Practicum                                  | 城市与环境学院    | 1  | 1  | 林坚                            | 分散各导师组, 以具体通知为准                                | A  |
| 120 | 12733110 | <a href="#">大气化学基础</a>        | fundamental of Atmospheric chemistry                                     | 环境科学与工程学院  | 1  | 2  | 叶春翔                           |  | B  |
| 121 | 12739040 | <a href="#">环境综合实习一</a>       | Environmental Integrated Fieldwork One                                   | 环境科学与工程学院  | 1  | 1  | 刘兆荣                           | 预计7月15日-7月26日                                  | A  |
| 122 | 12739060 | <a href="#">环境综合实习二</a>       | Environmental Integrated Fieldwork Two                                   | 环境科学与工程学院  | 1  | 1  | 刘兆荣                           | 预计7月4日-7月15日                                   | A  |
| 123 | 18730010 | <a href="#">社会调查实务</a>        | Social Surveys Practices   | 中国社会科学调查中心 | 1  | 2  | 丁华, 孙妍, 吴琼, 陈欣欣, 吕萍           |  | B  |
| 124 | 18730020 | <a href="#">社会调查数据分析方法</a>    | The Analysis Methods of Social Survey Data                               | 中国社会科学调查中心 | 1  | 2  | 顾佳峰, 吴琼, 孔涛, 陈欣欣, 任强, 任莉颖(校外) |  | B  |
| 125 | 20133003 | <a href="#">英国研究</a>          | British Studies  | 汇丰商学院      | 1  | 3  | 刘芍佳                           |  | A  |
| 126 | 21100013 | <a href="#">水资源稀缺经济和政策分析</a>  | Economy of Water Scarcity and Policy Analysis                            | 现代农学院      | 1  | 2  | 王金霞                           | 7月24到7月31日下午2点到6点                              | B  |

| 序号  | 课程号      | 课程名称                                     | 英文名   | 开课系所  | 班号 | 学分 | 授课教师   | 备注  | 类型   |
|-----|----------|--|---|-------|----|----|--|---|------|
| 127 | 21130001 | <a href="#">植物发育及分子生物学</a>               | Plant Development and Molecular Biology   | 现代农学院 | 1  | 2  | 邓兴旺, 林辰涛(校外), 乔红(校外), 赵云德(校外), Dong Juan(校外) | 腾讯会议在线上上课, 7月10日至7月15日: 上午8:00~11:00 晚上19:00~22:00                      | B    |
| 128 | 21130002 | <a href="#">植物知道生命的答案</a>                | What A Plant Knows: The surprising world of plant senses                        | 现代农学院 | 1  | 2  | 邓兴旺, Daniel Chamovitz(校外)                    |   | B    |
| 129 | 21130011 | <a href="#">经济学视角下的资源环境热点问题</a>          | Hot Topics on Natural resources and the Environment from economics perspectives | 现代农学院 | 1  | 2  | 侯玲玲  | 7月4日开始上课, 连续10天。  | B    |
| 130 | 21130013 | <a href="#">经济学模型CGE的基本原理及优化软件GAMS编程</a> | Principles of CGE model and Programming   | 现代农学院 | 1  | 2  | 解伟   | 7月4日-7月8日全天, 7月10日半天  | B    |
| 131 | 21130015 | <a href="#">管理经济学基础</a>                  | Economic Principles for Management  | 现代农学院 | 1  | 2  | SHENGYU                                      |   | B    |
| 132 | 21130016 | <a href="#">食物安全: 政治经济学和心理学研究</a>        | Food Security: Political Economics and Psychology                               | 现代农学院 | 1  | 2  | 王晓兵  | 7月17日-7月23日, 上课时间9:00am-11:00am, 14:00pm-17:00pm, 最后一天下午14:00pm-18:00pm | B    |
| 133 | 21130017 | <a href="#">发展经济学及其在中国的实践</a>            | Development Economics and Its Practice in China                                 | 教务部   | 1  | 3  | 刘承芳  |   | 国际课程 |
| 134 | 21130018 | <a href="#">植物大迁徙</a>                    | The Great Plant Migrations  | 现代农学院 | 1  | 2  | 周岳   |   | B    |
| 135 | 21130019 | <a href="#">计量经济学因果识别方法详解</a>            | An Introduction to Causality Identification Methods                             | 现代农学院 | 1  | 2  | 黄开兴  | 上课时间每周三-周六下午2点-6点, 两周完成   | B    |

| 序号  | 课程号      | 课程名称                 | 英文名   | 开课系所      | 班号 | 学分 | 授课教师                       | 备注                               | 类型   |
|-----|----------|----------------------|---|-----------|----|----|----------------------------|----------------------------------|------|
| 136 | 21130020 | 数字技术与经济发展: 文献导读和案例讨论 | Digital Technology and Economic Development: Literature and Cases | 现代农学院     | 1  | 2  | 王悦                         | 7月10日-7月24日, 每天3小时, 周六日不上课。      | B    |
| 137 | 21130021 | 免疫检测                 | Immunoassay method  | 现代农学院     | 1  | 2  | 张改平, 张意锋                   | 7月4日至7月10日, 7月10日至13日, 每天下午1点~5点 | B    |
| 138 | 23200016 | “材料+” 科创讲堂           | “Materials+” Innovation and Entrepreneurship Lecture              | 材料科学与工程学院 | 0  | 1  | 林立                         | 预计7月开课, 具体另行通知                   | A    |
| 139 | 30340009 | 中国民俗与文化              | Chinese Folklore and Culture                                      | 教务部       | 1  | 2  | 王娟                         |                                  | 国际课程 |
| 140 | 30340059 | 中国古典诗词               | Classical Chinese Poetry  | 教务部       | 1  | 2  | 梅申友                        |                                  | 国际课程 |
| 141 | 30340076 | 中国现当代小说与电影           | Modern Chinese Fiction through Film                               | 教务部       | 1  | 2  | 马乃强                        |                                  | 国际课程 |
| 142 | 30340082 | “中国崛起” 专题研讨课         | The Rise of China and Change in World Politics                    | 教务部       | 1  | 3  | 徐昕(校外)                     |                                  | 国际课程 |
| 143 | 30340094 | 中国改革与世界经济            | China in the Global Economy                                       | 教务部       | 1  | 3  | 陈绍锋                        |                                  | 国际课程 |
| 144 | 30340095 | 中国经济导论               | Introduction to Chinese Economy                                   | 教务部       | 1  | 3  | 季曦                         |                                  | 国际课程 |
| 145 | 30340095 | 中国经济导论               | Introduction to Chinese Economy                                   | 教务部       | 2  | 3  | LIUMINQUAN (刘民权)           | 线上教学                             | 国际课程 |
| 146 | 30340099 | 全球背景下的视觉传播           | Visual Communication for a Global World                           | 教务部       | 1  | 3  | Laurence Simmons (校外), 刘红中 |                                  | 国际课程 |
| 147 | 30340103 | 《资治通鉴》导读             | ZI ZHI TONG JIAN Guide  | 教务部       | 1  | 2  | 姜鹏(校外)                     | 7月24日至8月3日, 每周一至周四 1-4节          | B    |
| 148 | E1273913 | 气候变化与可持续发展           | Climate Change and Sustainable Development                        | 教务部       | 1  | 2  | 戴瀚程                        |                                  | 国际课程 |

| 序号  | 课程号      | 课程名称                              | 英文名   | 开课系所      | 班号 | 学分 | 授课教师         | 备注  | 类型 |
|-----|----------|-----------------------------------|---|-----------|----|----|--------------|---|----|
| 149 | 30340107 | <a href="#">听觉文化与世界文明</a>         | Aural Culture and World Civilization  | 教务部       | 1  | 2  | 毕明辉(校外)      | 7月4日至14日, 每周二、三、四、五; 第7-8和10-11节                              | B  |
| 150 | 30340108 | <a href="#">伦勃朗与维米尔</a>           | The Art of Rembrandt and Vermeer  | 教务部       | 1  | 2  | 刘晨(校外)       | 7月4日至14日, 每周二、三、四、五, 每日第5-8节。                                 | B  |
| 151 | 30340109 | <a href="#">欧洲文化: 从古典希腊到文艺复兴</a>  | European Culture From Classical Greece to the Renaissance                                 | 教务部       | 1  | 2  | 朱孝远          | 7月4日至14日, 每周二、三、四、五, 每日第3-4、5-6节                              | B  |
| 152 | 00333050 | <a href="#">金工实习</a>              | Metalworking Practice   | 材料科学与工程学院 | 1  | 3  | 高嵩, 张杨飞, 莫凡洋 | 详见邮件通知  | A  |
| 153 | 23200017 | <a href="#">工程实训</a>              | Engineering Training  | 材料科学与工程学院 | 1  | 3  | 高嵩, 张杨飞, 莫凡洋 | 详见邮件通知。面向理工科学生  | A  |
| 154 | 23200018 | <a href="#">工程实训B</a>             | Engineering Training B  | 材料科学与工程学院 | 1  | 2  | 高嵩, 张杨飞, 莫凡洋 | 详见邮件通知。面向文科生  | A  |
| 155 | 01132679 | <a href="#">产业实习实践</a>            | Industry practice   | 生命科学学院    | 1  | 3  | 王世强, 唐平      | 请关注“生声不息”公众微信号5月发布的前期培训通知, 经学院审核通过后方能选课。                      | A  |
| 156 | 19530004 | <a href="#">城乡建成环境文化遗产研究与实践调查</a> | Urban and Rural Built Environmental Cultural Heritage Research and Practice Investigation | 建筑与景观设计学院 | 1  | 2  | 汪芳           | 景观学院401, 7.4-7.21。上课名单需面试确定, 选课请给wfphd@pku.edu.cn发邮件, 留下联系方式。 | A  |

| 序号  | 课程号      | 课程名称                    | 英文名                                   | 开课系所 | 班号 | 学分 | 授课教师 | 备注 | 类型 |
|-----|----------|-------------------------|---------------------------------------|------|----|----|------|----|----|
| 157 | 06733030 | <a href="#">教育与人工智能</a> | Education and Artificial Intelligence | 教育学院 | 1  | 2  |      |    | B  |

### 课程目录Course Catalog

课程号 (Course Number): 00332950

课程名称 (Course Title): 航空航天工业实习/Aerospace Industry Intern Program

开课院系 (School/Department): 工学院/College of Engineering

学分 (Credits): 3

授课教师 (Faculty): 周超

先修课程 (Prerequisites): 无

#### 中文简介:

组织高年级本科生参观和访问航空和航天中有代表性的工业单位，在条件（保密、时间）允许的情况下适当从事科研实践活动，从而对我国航空航天研究、发展和生产单位建立一定的了解，为学生下一步在个人感兴趣的航空航天子课题上继续深入学习和研究指明方向。

#### 英文简介 (Course Description):

This course will organize several visitings and intern programmes of aerospace industry for junior undergraduates. These activities are designed to help our students deep understanding and build up an overview of Chinese aerospace industry, which could in turn guide their study and research in the near future.

-End-

课程号 (Course Number): 00333106

课程名称 (Course Title): 智能制造与服务系统/Intelligent Manufacturing and Service Systems

开课院系 (School/Department): 工学院/College of Engineering

学分 (Credits): 3

授课教师 (Faculty): Andrew KUSIAK(校外)

先修课程 (Prerequisites): 不需要先修其他课程

#### 中文简介:

制造业和服务业正在向更大的服务导向和自主性转型。传感器和无线技术捕获数据的应用在各个行业都在增长。该课程对新出现的系统配置进行分析、优化和设计，讨论了支持智能制造和商业系统设计和分析的模型、方法和算法，介绍了数据科学、计算智能、云计算和各种

x-as-a-service系统。

**英文简介 (Course Description):**

Manufacturing and service industry is undergoing a transformation towards greater service orientation and autonomy. The use of sensors and wireless technologies capturing data is growing across industries. Emerging configurations of systems are analyzed, optimized, and designed. Models, methodologies, and algorithms in support of design and analysis of intelligent manufacturing and business systems are discussed. Data science, computational intelligence, cloud computing, and diverse x-as-a-service systems are introduced.

-End-

**课程号 (Course Number):** 00333109

**课程名称 (Course Title):** 可持续性理论与实践/Sustainability Theory and Practices

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** Tracy Cui (校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程将向学生介绍当前和未来能源供需的可持续性。课程将利用案例研究和实例，重点介绍可持续性理论和实践、二氧化碳排放和气候变化，当前和未来能源需求、高收入和低收入国家能源部门的未来挑战和机遇，跨学科和跨部门参与发展，以及这些解决方案如何影响社会、经济和环境。这门课程将由Rod Bain博士教授，并将邀请相关领域客座专家参与。

**英文简介 (Course Description):**

This course will introduce students to sustainability in the context of energy supply and demand both now and in the future. Using case studies and practical examples, the course will focus on sustainability theory and practice, current and future energy demands in terms of CO2 emissions and climate change, future challenges and opportunities in the energy sector for high and low income countries, trans/interdisciplinary and cross sectoral engagement in the development of energy solutions, and how these solutions may affect society, economies and the environment. This course will be led by Dr Rod Bain and will feature lectures from a range of experts from across the university.

-End-

**课程号 (Course Number):** 00333145

**课程名称 (Course Title):** 优化和学习的模拟方法/Simulation Methods for Optimization and Learning

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** Bernd HEIDERGOTT(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程讲解了使用计算机模拟进行动态随机模型分析与优化的要点。课程的重点放在利用离散事件动态系统来模拟随机系统，以及通过离散事件仿真分析和改进其模拟的表现。课程内容的应用广泛分布于各种领域，从社交网络到计算机网络，从金融工程到商业过程。本课程将通过基于模拟仿真的优化和学习方法来为学生介绍计算机模拟在动态随机模型分析中的应用。课程要回答的首要问题是如何使用模拟仿真来为现实生活中的问题做出更优、更负责任的决策。此外，课程还将回顾针对上述问题我们所见证的技术与数学理论上的进步。在积极设计模拟仿真课题的同时，课程还将会花时间回顾相应的数学与技术模型。亦即，在学习实用技术的同时，课程鼓励学生去思考与总结相关的科学与技术发展成果。

**英文简介 (Course Description):**

This course gives a broad treatment of the important aspects of the use of computer simulation for the analysis and optimization of dynamic stochastic models. The emphasis is on modeling the stochastic system as a discrete event dynamic system, and analyzing and improving its performance by means of discrete event simulation. Applications will stem from a wide range of domains: from Social Networks to Computer Networks, and Financial Engineering to Business Processes. The course will introduce students to the use of computer simulation in analyzing dynamic stochastic models through simulation-based methods for optimization and learning. The leading question of the course is how to use simulation to make better and more responsible decisions for real-life problems. The course will also reflect on the technological and mathematical developments we witness in our societies. While actively working on simulation projects, the course will provide space for reflecting on the mathematical/technological paradigm. That is, next to learning the actual techniques, students will be stimulated to reflect on the history of science and the technological developments around them.

-End-

**课程号 (Course Number):** 00333181

**课程名称 (Course Title):** 工程项目管理中的金融决策/Financial Decisions in Engineering Project Management

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** Daricha Sutivong(校外)

**先修课程 (Prerequisites):**

**中文简介:**

本课程主要介绍了在项目评估中广泛使用的金融技术。基于货币时间价值观念，该课程探讨如何分析和评估各种现金流模式，并提供项目评估和决策的常用方法，包括净现值、收益率，以及单一或多个项目决策的应用规范。该课程还涉及使用盈亏平衡分析，敏感性分析，决策树等方法在不确定环境下决策问题。学生将有机会在一个团队项目中对他们感兴趣的问题进行财务分析，创建管理报告并进行展示。

**英文简介 (Course Description):**

The course introduces widely-used financial techniques for project evaluation. Based on the time value of money concept, the course examines how to analyze and value various cash flow patterns and provides popular economic measures for project assessment and selection, including the net present value and the rate of return, along with the application criteria for single and multiple project decisions. The course also addresses decision under uncertainties using techniques such as breakeven analysis, sensitivity analysis, decision tree, etc. Students will have an opportunity to perform a financial analysis of their interested problem in a group project and creating management report and presentation.

-End-

**课程号 (Course Number):** 00333390

**课程名称 (Course Title):** 生物医学工程实习/Biomedical Engineering Practice

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** 孙红芳

**先修课程 (Prerequisites):** 高等数学、大学物理、分子与细胞生物学、解剖学

**中文简介:**

本课程在美国佐治亚理工大学的生物医学工程系进行。本科生在那里会进不同的实验室直接参与科研活动，同时选修一至两门相关实验类课程。课程也安排参观世界一流实验室或科研设施，和本领域著名学者直接面对面讨论和交流。

**英文简介 (Course Description):**

This course is taken at Georgia Institute of Technology at Atlanta. All undergraduates will be assigned a research lab to take part in various projects. They also will take one or two experimental courses. In the meantime, students have opportunities to visit cutting-edge research facilities, and discuss with

world-famous scientists face to face.

-End-

**课程号 (Course Number):** 00333670

**课程名称 (Course Title):** 中国经济: 科技、增长与全球联系/China Economy: Technology, Growth and Global Connections

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** Susan Mays(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程介绍中国在全球化背景中的经济发展。通过授课、案例分析、访问机构和企业, 本课程将考察贸易趋势、外国投资、公私产权、金融、劳动力、消费以及关键商业部门等问题。课程还将讨论中国在环境、能源、教育及医疗方面的挑战与机遇。本课程由经济历史学家教授, 将考虑中国独特的历史、文化和商业背景, 以及全球合作与影响。课程的阅读材料和案例来自学者、商业领袖、经济学家和记者。

**英文简介 (Course Description):**

The course addresses China's economic and technological development in a global context, circa 1978 to the present. It examines major trends in the economy and society, including trends in income, the workforce, trade, foreign investment, and ownership (i.e., public vs. private.) The class presents China's progress and challenges in education, healthcare, family economics, environment and law. In all these topics, the course considers China's unique history and culture while also addressing the role of technology and global partnerships. The final week includes a trip to the Shanghai region to visit tech-related organizations.

-End-

**课程号 (Course Number):** 00333724

**课程名称 (Course Title):** 中华语言文化/Chinese Language and Culture

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** ZHANG Aidong(校外)

**先修课程 (Prerequisites):** N/A

Undergraduate and Graduate Students (all majors and all levels) with prerequisite: Basic Chinese reading and listening skills

**中文简介:**

本课程旨在介绍中华语言和文化的不同方面。包括中国思想、文化和语言之间的关系、中国语言和文字的特点、中国社会、民间传说和语言、中国人的思维模式和思维方式、东西方的思维方式和文化属性、社会和文化的变化及其对汉语的影响。

**英文简介 (Course Description):**

This course is designed to introduce different aspects of Chinese language and culture. Including, the relationship between Chinese thought, culture, and language. The characteristics of Chinese language and scripts. Chinese society, folklore, and language. Chinese thought patterns and thinking styles. Eastern and Western ways of thinking and the cultural attributes embedded. The social and cultural changes as well as its influence on Chinese language.

-End-

**课程号 (Course Number):** 00334241

**课程名称 (Course Title):** 机器学习算法: 从数学到代码/Machine Learning Algorithms: From Math to Code

**开课院系 (School/Department):** 工学院/College of Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** WANG Ruye (校外)

**先修课程 (Prerequisites):** N/A.

The student is expected to have gained familiarity with the basic concepts in calculus, linear algebra, and probability, and proficiency in some programming language (Matlab, python, etc.).

<Introduction to Machine Learning – From Math to Code>, the material will be provided during the course.

**中文简介:**

本课程涵盖了机器学习 (ML) 中最基本的主题, 机器学习是人工智能的核心, 包括用于监督学习的统计和神经网络方法, 如朴素贝叶斯分类、AdaBoost算法、支持向量机 (SVM)、高斯过程分类 (GPC)、决策树学习、感知器网络和反向传播网络; 以及无监督学习, 如K-means聚类、期望最大化 (EM)、竞争学习网络和自组织映射 (SOM)。本课程还讨论了数据压缩和特征选择中的各种相关问题, 包括主成分分析 (PCA) 等降维方法。本课程还涵盖了各种学习算法所需的一些相关数值方法, 例如求解特征值问题的算法, 以及有约束和无约束的线性和二次优化问题。本课程强调课堂上讨论的各种算法背后的必要理论和数学, 以及这些算法的代码实现, 这些算法由学生以任意语言 (如Matlab (推荐)、C++和python) 作为作业, 由学生自行选择。

**英文简介 (Course Description):**

This course covers the most essential topics in machine learning (ML), which is in

the very core of artificial intelligence, including statistical and neural network methods for both supervised learning, such as naive Bayes classification, AdaBoost algorithm, support vector machines (SVM), Gaussian process classification (GPC), decision tree learning, perceptron network and back propagation network; and unsupervised learning, such as K-means clustering, expectation maximization (EM), competitive learning network and self-organizing map (SOM). The course also discusses various related issues in data compression and feature selection, including dimension reduction methods such as principal component analysis (PCA). The course also covers some related numerical methods necessary for the various learning algorithms, such as algorithms for solving eigenvalue problems, and for linear and quadratic optimization problems both with and without constraints. The course emphasizes the necessary theories and mathematics behind the various algorithms, discussed in class, as well as the code implementation of such algorithms, carried out as homework assignments by the students in any language such as Matlab (recommended), C++, and python, of the student's choice.

-End-

**课程号 (Course Number):** 00432206

**课程名称 (Course Title):** 量子力学专题/Advanced topics in Quantum Mechanics

**开课院系 (School/Department):** 物理学院/School of Physics

**学分 (Credits):** 2

**授课教师 (Faculty):** B. Rosenstein(校外)

**先修课程 (Prerequisites):** 量子力学

#### 中文简介:

目前,国内现有的量子力学课程着重讲授非相对论性量子力学的基本理论和方法,对其路径积分形式的表述和实际具体的计算方法、解决具体实际问题的应用等大多不予深入讨论、甚至根本不提及,对于从量子力学到量子场论的过渡大多也不予讨论。该专题课程针对解决这些问题而开设,从而帮助同学打下从量子力学的形式理论过渡到开展具体物理研究的坚实基础。

本课程主要讲授非相对论性量子力学在描述一些基本量子现象的应用(比如能谱、量子动力学、散射理论、隧穿理论、AB效应和Berry相位等)和量子力学中的路径积分、格林函数及其它一些基本问题的实际计算方法(比如半经典近似、变分法、数值计算方法、一些精确可解模型、微扰的费曼图展开理论等等)。课程将采用新的理论框架(路径积分和其相关计算技术)来描述量子现象,从而为同学们进一步学习量子多体理论等后续课程打下扎实的理论基础。该课程将在突出清晰的物理概念的同时,强调具体计算技能(包含解析和数值两方面),并结合当前的研究实例来展开。

#### 英文简介 (Course Description):

The course provides a deeper understanding of general phenomena in systems that behave essentially quantum mechanically and practical introductions to methods

used to describe the behavior.

The phenomena discussed include the nature of spectrum, quantum dynamics, scattering and tunneling. In addition to a survey of exactly solvable problems, a variety of approximations are introduced: from perturbation theory, semiclassical, variational to numerical simulation. General tools of the Green's functions and path integrals are also introduced and utilized.

-End-

**课程号 (Course Number):** 00432216

**课程名称 (Course Title):** 量子力学 (II)/Quantum Mechanics (II)

**开课院系 (School/Department):** 物理学院/School of Physics

**学分 (Credits):** 2

**授课教师 (Faculty):** 钱志新

**先修课程 (Prerequisites):** 量子力学 I

#### 中文简介:

在量子力学 I 的基础上, 介绍He原子和多电子原子的基本理论, 主要讨论量子力学中的微扰理论和变分方法; Hartree 理论, Hartree-Fock 理论和Thomas-Fermi理论. 双原子分子、多原子分子的转动谱和振动谱. 价键理论的基本概念. 介绍量子力学中的Feynman 路径积分方法 (以自由粒子和谐振子为例). 介绍WKB近似, Bohr 量子化条件, 势垒的隧穿. 量子力学里态的相干态描述; 介绍量子力学中的相位, 包括Aharonov-Bohm 效应的实验观察; 引力导致的量子力学相位效应; Berry 相和 Aharonov-Anandan 的介绍. 讨论量子力学中的密度矩阵理论和Wigner函数的概念.

#### 英文简介 (Course Description):

This course is intended for senior undergraduate students or motivated junior undergraduate students in physics

major or chemistry major who have completed the study of the one-semester course of quantum mechanics. The level is more advanced than the usual course of quantum mechanics. Several topics listed below will get discussed

at a high level. The method of the perturbation theory and the variational theory in quantum mechanics will be presented at the beginning. Introductory materials to the study of the

atom of helium and those with more than two electrons are then presented the next. The methods of Hartree theory, Hartree-Fock theory, and Thomas-Fermi theory are discussed; quantum mechanical many-body theory is presented but at the level of an introduction. The main topics further cover several other basics in the quantum chemistry, like the rotation and vibration of a diatom molecule and other small (and somehow simple) molecules. The path integral approach of Feynman to quantum mechanics is discussed. The course also include the subjects on the semi-classical methods such as WKB approximation; the application of them to bound states and

scattering states is discussed. The final part of this course is devoted specifically to the topic on phases in quantum mechanics. After introducing the concept of phase in quantum mechanics, we discuss their effects in the Aharonov-Bohm experiments and other important experiments. On theoretical aspect, we introduce and discuss the concepts of the Berry phase and the Aharonov-Anandan phase. The theory of density matrix and the introduction to the Wigner function might also be presented in the course, though not always.

-End-

**课程号 (Course Number):** 00437151

**课程名称 (Course Title):** 物理学科暑期专题研讨/Selected Topics on Physics

**开课院系 (School/Department):** 物理学院/School of Physics

**学分 (Credits):** 2

**授课教师 (Faculty):** 闻新宇

**先修课程 (Prerequisites):** 无

**中文简介:**

物理学院举办的物理学、大气与海洋科学、天文学、核科学与技术领域的暑期学校；授课时间超过34学时，记2学分。

**英文简介 (Course Description):**

Selected Topics on Physics

-End-

**课程号 (Course Number):** 01035280

**课程名称 (Course Title):** 化工新概念/New concept of modern chemical industry

**开课院系 (School/Department):** 化学与分子工程学院/College of Chemistry and Molecular Engineering

**学分 (Credits):** 1

**授课教师 (Faculty):** 马莲(校外)

**先修课程 (Prerequisites):** 化学化工相关课程

**中文简介:**

本课程是授课老师根据自己二十多年在现代跨国公司工作的职业生涯及经验，以现代跨国公司为案例，介绍现代工业企业如何创新及可持续发展。并通过案例分析帮助同学们对现代国际化的化工行业及化工公司的发展理念，基本构架及运营有一个全面深入的了解！同时介绍现代化工行业与其他工业行业之间的相互关系以及化工行业未来的发展趋势。最后详细介绍现代人才所需的基本素质，求职和未来职业发展的设计与规划！

**英文简介 (Course Description):**

暂无

-End-

**课程号 (Course Number):** 01035430

**课程名称 (Course Title):** 化学应用与实践/Application and Praticce of Chemistry

**开课院系 (School/Department):** 化学与分子工程学院/College of Chemistry and Molecular Engineering

**学分 (Credits):** 1

**授课教师 (Faculty):** 王颖霞, 高珍, 吕占霞, 马锴果, 黄军, 徐金荣, 杨玲, 王岩, 徐烜峰

**先修课程 (Prerequisites):** 无

#### 中文简介:

本课程旨在提高学生的劳动素养,树立正确的观念,培养学生必要的劳动能力。

课程内容由反映化学学科特点的几个模块组合而成。学生可以自主选择并完成32个学时。各模块的实践内容循序渐进。学生必须完成所要求的基本任务和学时。然后,可以自主选择不同的任务或者进一步完成具有挑战性的工作以满足总学时要求。

该课程包括四个模块:化学应用、金工实践、社会服务和开放实践。

#### 英文简介 (Course Description):

This course aims to encourage the students to improve their labor literacy, to establish proper attitude to Labor and to develop necessary labor ability.

The content of the course is a combination of several modules which reflects the characteristics of the chemistry discipline. Students can choose independently and complete 32 credit hours. The practical content of each module is progressive and strengthened. Students must take the required basic tasks and credit hours. Then they can select different tasks to take a challenging work to complete the left hours.

The course now includes four modules: chemical application, metal woking practice, social service, and open practice.

-End-

**课程号 (Course Number):** 01130912

**课程名称 (Course Title):** 南海海洋生态学野外实践/Marine Ecology Field Practice of South China Sea

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 顾红雅, 饶广远, 贺新强, 李大建, 王戎疆, 龙玉, 孟世勇, 李晟

**先修课程 (Prerequisites):** 生物学综合野外实习(或同类课程)

**中文简介:**

本课程面向生态学与演化生物学方向的2、3年级本科生，借由海洋生态学中的具体实例课题使学生掌握生态学研究的基本方法和流程，提升学生解决实际问题的科研实践能力和综合运用多学科知识的自主创新能力。课程实践地点在广西钦州三娘湾，以广西北部湾潮间带、近岸、浅海的多类型生态系统为天然实验室，以海洋生态学中的实例课题为载体，引领学生深入了解南海热带海洋生态系统的物种组成、种间关系、物质循环、能级传递，各类生态因子的作用及关系，人类活动对生态系统的影响等，并运用种群生态学、群落生态学及生态系统生态学的基本原理和研究方法解释现象、总结规律、提出并验证假设、解决生产实践中的具体问题。

**英文简介 (Course Description):**

This is a field practice course for senior grade students in the major of ecology and evolution biology. The students will be organized to work on specific in situ cases of marine ecology topics using integrative research tools. The course will be taught at Sanniang Bay, Qinzhou, Guangxi, and use the intertidal and coastal areas of Beibu Bay as the study ecosystems. The students will learn knowledge of species composition, inter-specific relationship, energy flow and nutrient cycling etc. of the study systems, and gain insights into the ecological process and human-nature interactions of coastal South China Sea.

-End-

**课程号 (Course Number):** 01131435

**课程名称 (Course Title):** 植物细胞发育/Plant Cell Development

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 瞿礼嘉, Juan Dong(校外)

**先修课程(Prerequisites):** Interested in plant sciences, molecular biology, biochemistry, cell biology and genetics are required.

**中文简介:**

全面介绍当代植物生物学研究基础与进展，包括研究方法学、分生组织\胚胎等发育过程、激素调控、表观遗传学等最新内容。

**英文简介 (Course Description):**

The course will cover major aspects of the modern plant biology from basics to most recent development, which includes new development in methodology, plant developmental processes such as meristems and embryo, regulation of phytohormones and epigenetic control of plant responses to the environment, and etc.

-End-

**课程号 (Course Number):** 01132685

**课程名称 (Course Title):** 衰老生物学/Biology of aging

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 陶伟

**先修课程 (Prerequisites):** 具备基本的细胞生物学和遗传学的基本知识。

**中文简介:**

随着我国以及世界许多发达国家人口进入老龄社会，衰老成为对社会和发展有着重大影响的一门学科。衰老和健康老年也成为当前的热门话题和研究领域。本课程讲授衰老发生的基本原理和当前的主要理论，着眼于介绍与人类生活和健康密切相关的衰老知识，揭示衰老与社会普遍关注的癌症，神经退行性疾病以及心血管疾病等诸多衰老相关疾病发生的科学关系，介绍当前衰老科学的重大进展及其对当前人类社会及未来的深远影响，阐述当前潜在的抗衰老途径方法和现实意义，以及抗衰老面临的机遇和挑战。

**英文简介 (Course Description):**

With the population of our country and many developed countries entering the aging society, aging has become a subject that has a significant impact on society and development. Aging and healthy aging have become hot topics and research fields. This course introduces the basic principles and current main theories of aging, focuses on the introduction of aging knowledge closely related to human life and health, reveals the scientific relationship between aging and many aging related diseases, such as cancer, neurodegenerative diseases and cardiovascular diseases, which are generally concerned by the society, and introduces the major progress of current aging science and its depth to the current human society and the future Far influence, expound the current potential anti-aging methods and practical significance, as well as the opportunities and challenges of anti-aging.

-End-

**课程号 (Course Number):** 01133036

**课程名称 (Course Title):** 生命的逻辑/The logic of life

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 白书农

**先修课程 (Prerequisites):** 无

**中文简介:**

2021修改版:

《生命的逻辑》课程从2016年试开至今，已经开讲5年了。在2018年发布过一版课程介绍。该版介绍概括了2016、2017两年期间的课程内容，也介绍了选课同学的反馈。在之后三年，尤其是新冠疫情造成的影响，授课教师对“生命的逻辑”有了更深多的思考。加上2020年新冠疫情所致的居家工作，让授课教师有机会把之前几年授课内容整理成文。这些思考和写作，都使得本课程的内容和授课方式需要做出一些调整。另外，在过去5年授课过程中，注意到大部分同学很难有阅读课程推荐的参考书和文献的时间，好在从2019年至今，授课教师有幸获得一些演讲和专栏写作的机会，对本课程的内容做过一些概述。可以为有意向选修本课程的同学了解课程内容提供一些参考。

另外，本课程有一个特别的要求，即在开课第一天提交一份课前论文《我理解的生命》。概述一下自己目前理解的生命。篇幅在2页A4纸。请选课的同学做好准备。

2018版：

都说要珍惜生命。可是生命是什么？很多学者都认为他们在解读生命甚至“规定”生命。可是如果我们了解生命是在 $10^9$ （10亿）年的时间尺度中出现的自然现象，而人类有记录的历史不过是 $10^3$ （千）年的时间尺度上才发生的故事，会不会觉得号称自己或者自己研究的学科在“规定”生命的人在什么地方有点儿不对劲儿？

现在社会上，起码在我们的校园中，否认我们人类是生命体的人恐怕不多了。可是谁能说清楚“生命”究竟是什么？人们以为或者期待生物学家会给出标准答案，可是生物学家口中陌生而拗口的术语，他们演讲的幻灯片中令人眼花缭乱的符号，常常让绝大多数不以生物研究为业的人敬而远之。可是，树欲静而风不止。伴随对生命科学敬而远之的，却往往是对日新月异而且难以理解的新发现所带来的各种传言的困惑和面对变幻莫测生存环境的焦虑。生命科学发展得越迅猛，似乎离大众的距离也越远。研究者和大众之间在生命认知上越来越大的鸿沟该由谁来填补呢？

面对超越“摩尔定律”速率增加的生命科学研究领域的庞大信息，指望让大众按照专业生物教育的模式来了解生命显然是不现实的。可是，无论从社会还是从生命科学自身可持续健康发展的角度，又都不得不设法让更多的社会成员了解生命的本质和基本规律，从而在生活中遵循生命的规律而构建和谐的生活。毕加索当年受远古洞穴岩画启发而把毛发必现的写实的牛画成线条勾勒的抽象的牛，似乎为解决上述困境提供了一个值得尝试的途径：以抽象的方式，从海量信息中抽象出核心要素。看他寥寥几笔，大概没有几个成年人不会马上分辨出大师画的是“牛”而不是别的什么动物。以帮助受众思考生命本质、理解生命规律为目的，生命科学学院白书农教授根据其多年研究工作中形成的对生命的理解和感悟，设计了《生命的逻辑》课程，作为供全校同学（不分专业、不分年级）选修的通选课，和大家一起探讨我们每个人都无法回避的“生命”的本质及其规律问题。

本课程设计为暑假小学期小班课（限25人）。32个学时，2个学分。授课、讲座、结合讨论。主要围绕与大家日常生活密切相关的问题介绍与生命有关的基本知识及其内在联系。根据出席与讨论参与程度（10%）和两篇论文（每篇2000字左右的）以及两次讲座的心得（论文与心得共占90%）三方面来计成绩。两篇论文都是以“你理解的生命”主题，总结自己对“生命”的理解。在课程的开始和结束时各提交一篇。论文目的在于帮助选课者了解自己随课程进程对“生命”

现象理解的变化。论文将根据论点是否明确、论证是否有依据（是否有参考文献以及对参考文献引用的规范性）及论证的合理性等三方面予以评分。

特别值得介绍的是，本课程的讲座部分，将由两位美国著名大学的教授承担。一位是美国芝加哥大学的演化生物学教授龙漫远。他是国际上新基因起源研究的开创者和引领者。他将为本课程讲授生物演化的基本原理。另一位是位于美国西雅图的华盛顿大学的应用数学教授钱紘。他以数学的家学积淀，遍历天体物理、生物化学、蛋白质结构计算，最后在应用数学领域，用数学的方法，描述纷繁复杂的生命过程，从中发掘出简明美妙的基本规律。他将为本课程讲授能否以及如何用定量科学的逻辑来解释生命系统的内在规律。

### **英文简介 (Course Description):**

My independent scientific career started from an attempt to decipher genetic program of organ formation, using stamen as an experimental system. This effort led to a scenario that a stamen is a node of three cycles: cell cycle, sexual reproduction cycle and life cycle, functioning as a turning point linking multicellular structures and unicellular sexual reproduction cycle.

The rationale of choosing decipher genetic program of organ formation as a research interest could be traced back to my postdoc era in UC Berkeley with Renee Sung. Through a project characterizing an Arabidopsis mutant “embryonic flower” in Renee’s lab, I firstly faced a challenge on which the “vegetative” or “reproductive” phase is “default”, whether a plant has a developmental program, in comparison with animal individual, and if a plant has, when is its starting and ending point. To answer these questions, I proposed a new concept called “plant developmental unit (PDU)” in 1993 (Bai 1999; Bai and Xu 2013). This concept contains three aspects: 1) a plant should have a determined genetic program otherwise no “generation” could be identified. Such a determined genetic program starts from a zygote and ends at two different types of gametes; 2) while unlimited number of organs can be generated by a shoot tip (e.g. the shoot apical meristem in angiosperms), the organ types are limited. Therefore, all organ types, if we ignore the number and imagine one pair of organs each each type, generated from one shoot tip (using Arabidopsis as an example, including cotyledon, rosette leaf, cauline leaf, sepal, petal, stamen and carpal) consists a PDU ; 3) a plant that people usually considered as an individual is essentially not an individual comparable to an animal, such as a worm, a fly and a human, which carries out the genetic program, but a colony comparable to coral, consisting of unlimited number of partial PDU. This concept is essentially the elaboration of ideas proposed by the founder fathers of modern botany, i.e. Grew and Malpigi back to 17th century, carried out by Waddington in 1960s’ and should be revived in the future.

Based on the conceptual framework of PDU, I used to divide plant developmental program as three subprograms: vertical, controlling sequential emergence of organ types; horizontal, controlling organ formation of each type from a group of undifferentiated cells to an organ with particular shape, structure and function;

and environmental response. The first is too difficult to experimentally pursue and the third one is developed so well and I have no idea to make the progress any better. So I chose the second. I chose stamen as my experimental system not only because of its conservation in shape and function, but because of its application potential in artificial male sterility used for heterosis in crop improvement.

Taken together, a set of principles emerged that governs plant morphogenesis or development although numerous variations can be added in for each species. These principles could be summarized as “plant morphogenesis 123”. ONE means one start point, i.e. SRC. TWO means two themes, i.e. structure building (through “neo-modularization”) and environment responding (through two driving forces, i.e. photoautotroph and stresses responses). THREE means three sequential steps to complete a single “ring” :

1. photoautotrophism driving an increase in surface area for photosynthesis and away from the unicellularity of the SRC;
2. the increased external and internal stress that accompanies the increase in the surface area available for photosynthesis;
3. this increase in stress driving a reduction in the surface area available for photosynthesis and compelling the morphogenesis back toward the unicellularity of the SRC.

-End-

**课程号 (Course Number):** 01133125

**课程名称 (Course Title):** 古代DNA与人类演化/Ancient DNA and human evolution

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 遇赫

**先修课程 (Prerequisites):** 选课同学需对遗传和演化生物学有基本的认识。建议遗传学、演化生物学和生物进化论至少先修其一。

#### 中文简介:

古代DNA技术通过从考古或古生物学样本中获取生活在过去的生命体的遗传信息，研究其遗传和演化历史。近年来，古代DNA研究的飞速发展，为我们回答了一系列关于人类起源和演化历史的重大科学问题。本课程从古代DNA研究发展史、分子演化和人类演化中的基本概念、古代DNA研究基本方法和古代DNA在人类演化历史研究中的应用等四个方面，系统地介绍古代DNA研究如何帮助重构人类演化历史，可以帮助同学们较好地理解古代DNA研究理念、以及领域内的相关成果。课程适合对于遗传学、演化生物学和生物信息学有一定了解的高年级本科生选修。

**英文简介 (Course Description):**

By recovering genetic information from archaeological or paleontological remains, ancient DNA technique helps to investigate the evolutionary history of organisms living in the past. The development of ancient DNA study in the past years has answered a series of key questions about human origin and evolutionary history. This course systematically introduces how ancient DNA study helps the reconstruction of human past, from four aspects: the history of ancient DNA study, basic concepts in molecular evolution and human evolution, methods in ancient DNA study and the applications of ancient DNA in human evolutionary study. With this course, the students can have a comprehensive understanding of the findings in this field, and how ancient DNA studies are carried out. It is suitable for senior undergraduate students, with basic knowledge of genetics, evolutionary biology and bioinformatics.

-End-

**课程号 (Course Number):** 01134110

**课程名称 (Course Title):** 生态学野外实践/Field Practice of Forest and Wildlife Ecology

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 贺新强, 王戎疆

**先修课程 (Prerequisites):** 普通生态学, 生物学野外实习

**中文简介:**

生态学是研究生物与生物之间以及生物与环境之间关系的学科。生态学研究多在野外环境中开展, 有其特殊的研究方法和实施过程, 而这是无法通过一般课堂教学所能学习和体会的。本课程将把有一定生物学基础知识的本科生带到自然保护区等野外环境, 主要在四川省岷山北部, 以平武县王朗国家级自然保护区为核心基地, 并涵盖周边位于唐家河国家级自然保护区、九寨沟国家级自然保护区、老河沟自然保护区内的若干野外站点。通过让学生参与野外生态学研究项目, 学习野外生态学研究的基本过程和研究方法。通过本课程的学习, 学生将加深对生态学基本概念的理解, 了解生态学野外研究的基本过程 and 操作方法, 从而掌握实验设计、数据获取以及数据分析等基本方法, 培养学生基本的野外调查与科研能力, 为将来从事动物学、植物学、保护生物学和生态学野外研究奠定基础。

**英文简介 (Course Description):**

Ecology is focused on the relationship between organism and environment and between organisms. Being conducted in wild environment, ecological researches possess specific methods and protocols, which could not be learned in common courses. In this course, the students with general knowledge of ecology will be brought into the wild environment such as nature reserves. They will take part in the ongoing projects of forest and wildlife ecological researches, from which they

will learn the conventional and advanced methods in ecological researches. Through studying the course, the students will improve the understanding of general ecological concepts, and learn the methods of designing experiments, inquiring data, and analyzing data, which will confer the basis for ecological field research in future.

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**课程号 (Course Number):** 01134140

**课程名称 (Course Title):** 生物学综合野外实习/Field Practice of Biology

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 饶广远, 李大建, 王戎疆

**先修课程 (Prerequisites):** 植物生物学, 动物生物学

**中文简介:**

生物学野外实习是生物类本科生重要的学习内容和基本的教学训练, 是同学们了解生物多样性及其与环境相互关系的重要环节, 它不仅是对动物生物学、植物生物学和其它生物学课程课堂知识和室内实验内容的必要补充, 而且具有独特的形式、内容和效果。内容包括不同生境下植物的主要类群的识别, 陆生植物和海洋潮间带藻类识别、标本的采集和保存方法, 陆生动物(主要是昆虫)和海洋潮间带动物主要类群的识别, 啮齿类动物种群调查、鸟类环志和动物行为观察和动物标本的采集和制作方法。通过野外实习培养学生自主发现问题、解决问题的能力, 激发同学们探索自然奥秘的愿望, 进而从内心热爱自然, 热爱生命科学。此外, 野外实习还是培养同学之间互助、团结和合作精神的课堂。

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**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 顾红雅, 龙玉, 王戎疆

**先修课程 (Prerequisites):** 植物生物学, 动物生物学

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**学分 (Credits):** 2

**授课教师 (Faculty):** 李晟, 孟世勇, 王戎疆

**先修课程 (Prerequisites):** 植物生物学, 动物生物学

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发同学们探索自然奥秘的愿望，进而从内心热爱自然，热爱生命科学。此外，野外实习还是培养同学之间互助、团结和合作精神的课堂。

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**学分 (Credits):** 2

**授课教师 (Faculty):** 贺新强, 龙玉, 李晟, 孟世勇, 王戎疆

**先修课程 (Prerequisites):** 植物生物学, 动物生物学

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-End-

**课程号 (Course Number):** 01139632

**课程名称 (Course Title):** 生物化学实验/Biochemistry Lab

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 王青松, 刘旖璇

**先修课程 (Prerequisites):** 生物化学

#### 中文简介:

生物化学实验属于主干基础课，是与生物化学理论课配套的基础实验课程，该课程面向生命科学学院全体本科生，元培学院、化学与分子工程学院及其他学院部分本科生，双学位或辅修本科生，每学年学生约100余人。课程内容包括生物大分子的分离纯化、定量测定及性质鉴定，涉及的实验技术有生物大分子的制备技术、光谱分析技术、层析分离分析技术、电泳技术以及超速离心技术等。学生学习使用的生化仪器有离心机、可调式移液器、蛋白质电泳装置、蛋白质半干转印仪、蛋白-核酸检测仪及记录仪、分光光度计、酶标仪等。随着生物化学理论和实验技术的不断发展，教学内容也不断更新，增加新技术，增开新实验，教学内容以每学期教学大纲为准。

#### **英文简介 (Course Description):**

Biochemistry experiment is a major course associating with the theory study of biochemistry, which is intended to improve the basic experiment skills of undergraduate. This course is designed for all undergraduates at School of Life Sciences in Peking University and also available for undergraduates at Yuanpei College, College of Chemistry and Molecular Engineering and others, as well as dual degree or minor students. More than 100 students are involved in this course each academic year. Separation, purification, quantification, and identification of biological macromolecules are the main contents of this course. Experiment skills including preparation of biomolecules, spectrum analysis, chromatography, electrophoresis, ultracentrifugation etc. will be taught in this course. Students will learn to use instruments such as centrifuge, pipette, protein electrophoresis and semi-dry tran-sblot apparatus, protein and nucleic acid detector and recorder, spectrophotometer, microplate reader, and so on. With the development of biochemical theory and experimental technology, new technologies and experiments are constantly provided in the course. Details of teaching contents are showed in syllabus each semester.

-End-

**课程号 (Course Number):** 01230450

**课程名称 (Course Title):** 虚拟现实内容创作/Virtual Reality Content Creation

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 陈斌

**先修课程 (Prerequisites):** 本课面向全校文理科学生，无先修课程。

#### **中文简介:**

以虚拟现实、增强现实及模拟仿真为内容的虚拟仿真技术，成为近年创新技术热点，2016年被称为VR（虚拟现实）元年，各种VR硬件和系统爆发式集中亮相，虚拟现实将在未来5到10年间颠覆众多行业。虚拟仿真可以应用到学术科研、教育培训、休闲旅游、城市规划、安防应急等众多涉及国计民生的领域。

本课程是公选课《虚拟仿真创新应用与实践》的平行延伸课程，介绍各种类别虚拟现实内容，并重点加强实践教学环节，讲授虚拟现实内容创作特点、工具平台和开发实践，提升学生的创新能力、实践能力和就业能力。

**英文简介 (Course Description):**

Virtual simulation technology based on virtual reality, augmented reality, and simulation has become a hot spot in innovation in recent years. It is known as VR (Virtual Reality) in 2016. VR hardware and systems are exploited in a variety of places, and virtual reality will destabilize a wide range of industries in the next 5 to 10 years. Virtual simulations can be applied to academic research, educational training, leisure tourism, urban planning, security emergencies, and many other areas involving national economy and people's livelihood. This course is a parallel extension of the public-selected course "Application and Practice of Virtual Simulation Innovation", introducing various types of virtual reality content, and focusing on strengthening the practice teaching process to teach the features of virtual reality content creation, tool platforms, and development practices to enhance students' innovation, practice, and employment capabilities.

-End-

**课程号 (Course Number):** 01230470

**课程名称 (Course Title):** 北斗系统与时空智能/BDS-based Spatiotemporal Intelligence

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 陈秀万

**先修课程 (Prerequisites):** 不需要先修课程。

**中文简介:**

北斗系统是中国自主卫星导航系统，与美国GPS、俄罗斯GLONASS和欧洲GALILEO并称世界四大全球导航卫星系统 (Global Navigation Satellite System, GNSS)。北斗三号基本系统已于2018年底建成并开始提供全球基本服务，2020年7月完成全球系统建设并正式提供服务。时空智能和视觉智能、声音智能一样，属于人工智能的一部分。精准时空服务——动态厘米级静态毫米级的高精度定位服务和纳秒级授时服务，已经成为人工智能感知外在所需的基础信息之一。“北斗系统与时空智能”属于二十世纪七十年代以来被称为世界三大尖端技术（空间技术、能源技术、人工智能）之“空间技术”与“人工智能”的交叉领域。

本课程结合北斗时空智能应用创新和全国大学生创新创业实践相关项目的实施，以及北京大学“导航与位置服务”学科建设，基于“北斗杯”全国青少年科技创新大赛（教育部科技司、共青团中央学校部、中国科协青少年科技中心和中国卫星导航系统管理办公室于2010年联合发起）项目十余年来累积的大中学生科技创新成果及孵化经验，面向大学生和社会公众，介绍北斗卫星导航与时空智能的基本概念、发展历史、关键技术、典型应用和对创新型国家建设的深远影

响，展示北斗系统的应用发展前景，为大学生和社会公众提供一个全面了解北斗系统与时空智能的平台。

本课程依托北京大学全球大学生创新创业中心、地球观测与导航教育部工程研究中心、中欧卫星导航技术培训合作中心等平台，突出跨学科综合优势，加强与教育部卫星导航联合研究中心（应用技术研究分中心）21所成员高校和“北斗翱翔”青少年科技创新教育计划的专家团队、科技教师、企业高管、行业主管人员等的合作，探索将北斗时空智能技术的原理、应用和前景融入基础自然科学和社会人文科学中，培养、激发青少年开展北斗时空智能创新创业的兴趣、热情。

本课程将邀请政、产、学、研、用、资领域专家担任课程讲师和创业导师，通过讲座、考察、观摩、实训、挑战赛等形式，展现科学、技术、工程和商业等各个领域的专家对北斗时空智能技术的理解和创新创业体会。课程注重创新创业实践，以创新创业项目组为培养单元，选择若干个独具创意和产业化前景的时空智能应用领域（兼容芯片与智能终端、泛在定位与位置服务、导遥融合与时空云平台、车联网与智慧交通、安防监管与智慧应急、智能农机与智慧农商、航空导航与生命救援、船联网与智慧海洋、通导融合与智慧康养、时空智能与智慧城市、时空智能产教融合创新等）。优先支持“北斗杯”全国青少年科技创新大赛与“北斗之星”创新创业大赛丝路国际挑战赛获奖项目和双创孵化机构（创投基金）有资助意愿的项目，由双创“三师”（科技教师、科学大师、创业导师）对各项目团队进行针对性指导、训练，并通过挑战赛、项目路演、中外双创资源渠道对接等形式，推动双创团队和创投机构的成果转化与企业孵化合作。

#### **英文简介 (Course Description):**

BeiDou Navigation Satellite System (BDS) is one of the four space-based Global Navigation Satellite Systems (GNSS), along with US's GPS, Russia's GLONASS, and the Europe Union's Galileo. The China homegrown BDS system started to provide global initial service at the end of 2018 and global full operation service at the end of July 2020. Spatiotemporal intelligence, like visual intelligence and acoustic intelligence, belongs to part of artificial intelligence (AI). Precision space-time service has become one of the basic sensed information needed by AI. BDS/GNSS-based Spatiotemporal Intelligence (BDSI) belongs to the intersection field of space technology and artificial intelligence which, along with energy technology, have been called the world's three most advanced technologies since 1970s.

This course is aimed to integrate the incubation experience for and innovation achievements from participants of the BeiDou Cup China Adolescents Science & Technology Innovation Contest (BD-CASTIC) initiated by Science and Technology Department of the Ministry of Education with related organizations in 2010, and the navigation and location-based service (NLS) discipline initiated by Peking University, so as to provide innovation and entrepreneurship training for college students and other youngsters. The contents of the course include the introductions of basic concepts, development history, key technologies and typical applications of BDSI, and its far-reaching impact on the innovative country construction, and provide a platform for pioneers to fully understand BDS system and spatiotemporal intelligence.

Relying on Peking University Center for Innovation and Entrepreneurship of Global College Students, Engineering Research Center of Earth Observation and Navigation

of the Ministry of Education, China-Europe Satellite Navigation Technology Training and Cooperation Center etc., this course strengthens the interdisciplinary advantages and cooperation among the 21 member universities of Joint Center of GNSS of the Ministry of Education, and the organizers and experts of BDSShare Youth Science and Technology Innovation Education Program. Through the co-innovation among team experts, science and technology teachers, and enterprise executives, we wish to explore the principles, applications and prospects of BDSI technology into various natural sciences and social sciences, and cultivate and stimulate the interest and enthusiasm of young people in BDSI innovation and entrepreneurship.

Experts from governmental sectors, universities, institutions, application and investment organizations will be invited to serve as lecturers and entrepreneurship mentors. Through lectures, field surveys, project roadshow, training and challenge competitions, participants will share understanding of BDSI and their innovative and entrepreneurial experience with experts in various fields. The course focuses on the practice of innovation and entrepreneurship, with project team as the training unit. Each team chooses one of the BDSI application fields with unique creativity and industrialization prospects, with incubating support prior to the BD-CASTIC and BDStars (SilkRoad) Innovation and Entrepreneurship Competition award winning projects and those with funding intention from innovation and entrepreneurship incubators. Outstanding science and technology teachers, scientific experts and venture mentors will jointly provide targeted guidance and training to the project teams, so as to strongly promote the cooperation between the team and venture capitalists in achievements incubating and technology transfer.

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**课程号 (Course Number):** 01231440

**课程名称 (Course Title):** 区域地质实习/Excursion for Regional Geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 季建清

**先修课程 (Prerequisites):** (1) 地球科学导论; (2) 地质学原理; (3) 矿物学、岩石学 (结晶岩石学、沉积地质学); (4) 构造地质学 (structural geology); (5) 第四纪地质与地貌学。

**中文简介:**

**英文简介 (Course Description):**

暂无

-End-

**课程号 (Course Number):** 01231640

**课程名称 (Course Title):** 普通地质实习A/Introduction to Field Geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 张志诚

**先修课程 (Prerequisites):** 《地球科学概论 (二)》

#### **中文简介:**

本次野外教学实习对地球与空间科学学院地质和地球化学专业一年级学生来说是一次地质启蒙教育，是一次重要的认识实习，重点强调地质基本概念、基本知识和基本技能训练。通过短期的野外实践使同学们对地质学研究的主要内容和特点有一个比较全面的、概括的了解；通过野外实习来巩固《地球科学概论》地质学部分的课堂教学内容，来加深对课程有关内容的理解；在实习中学习象地质点定点和描述，罗盘和地形图的使用等地质工作最基本的野外工作方法；认识基本的地质体和地质现象、学会描述这些地质体和地质现象、分析它们形成的地质作用过程、综合分析北京地区的地质作用过程、了解北京地区地质演化历史、编制简单的实习报告。通过实习培养同学们对大自然的热爱，陶冶情操，提高对地质科学研究的兴趣；同时使同学们充分认识到地质实践对于地质科学的重要性。

#### **英文简介 (Course Description):**

Introduction to Field Geology is the basic experience in many undergraduate geology programs, and is recommended for freshmen of the School of Earth and Space Sciences, Peking University. It is usually taken in the summer following the freshmen year, after completion of An Outline of Earth Sciences. In this course, you will have the opportunity make an all-important transition from classroom theory to real-world understanding. You will begin to be able to acquire an understanding of the fundamentals of the science of geology by learning it and doing it, to evaluate how field data are used to construct the knowledge we have about the Earth and its long geologic history. This course is designed to acquaint you with generic field skills used in geology and related fields and apply these fundamental principles, which can be used in a wide variety of applications. You will learn how to develop skills in surveying and measurement, use outcrop observations and measurements to deduce regional interpretations, produce professional-quality geological stratigraphic sections, interpret geologic history from rock descriptions, geologic relationships, and measured sections, identify common rocks and minerals, read maps, recognize identify landforms, and geological processes and structures. Now that you can combine all of your knowledge and skills to investigate and interpret the geology of the West Hill of Beijing based on your own observations, and write a summary report interpreting the geologic history and significance of the era. You can gain additional life skills, including critical-thinking, problem-solving, team-work, scientific

writing, and professionalism. You may get an appreciation for the complexity and beauty of the Earth as well as the human impact on her processes during the field practice. You will find your study of the science of geology to be stimulating and rewarding, fully understand the importance of geological field trips of Earth Sciences.

-End-

**课程号 (Course Number):** 01231641

**课程名称 (Course Title):** 普通地质实习A讨论班/Seminar on field geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 张志诚

**先修课程 (Prerequisites):** 无

**中文简介:**

普通地质野外教学实习对地球与空间科学学院地质和地球化学专业一年级学生来说是一次地质启蒙教育，是一次重要的认识实习。除了老师的讲解和指导外，通过讨论课的形式，促使每位同学认真思考地质体和地质现象的地质作用过程，培养同学们独立思考的能力，努力使学生通过野外实习获得最好的学习和成长体验；不单纯强调知识和技能的传授，更加重视激励学生的好奇/自信/激情的内在发展动力与综合素质能力的培养。

**英文简介 (Course Description):**

Introduction to Field Geology is the basic experience in many undergraduate geology programs, and is recommended for freshmen of the School of Earth and Space Sciences, Peking University. Except for the teacher's explanation and guidance, through the form of discussion seminar, each student is urged to seriously think about the geological process of geological data, cultivate the students' ability of independent thinking, and strive to make the students obtain the best learning and growth experience through field geology. It does not simply emphasize the knowledge and skills, but pays more attention to the internal development driving force of stimulating students' curiosity / confidence / passion and the cultivation of comprehensive quality and ability.

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**课程号 (Course Number):** 01231641

**课程名称 (Course Title):** 普通地质实习A讨论班/Seminar on field geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 朱永峰

**先修课程 (Prerequisites):** 无

**中文简介:**

普通地质野外教学实习对地球与空间科学学院地质和地球化学专业一年级学生来说是一次地质启蒙教育，是一次重要的认识实习。除了老师的讲解和指导外，通过讨论课的形式，促使每位同学认真思考地质体和地质现象的地质作用过程，培养同学们独立思考的能力，努力使学生通过野外实习获得最好的学习和成长体验；不单纯强调知识和技能的传授，更加重视激励学生的好奇/自信/激情的内在发展动力与综合素质能力的培养。

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**课程号 (Course Number):** 01231641

**课程名称 (Course Title):** 普通地质实习A讨论班/Seminar on field geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 黄宝春

**先修课程 (Prerequisites):** 无

**中文简介:**

普通地质野外教学实习对地球与空间科学学院地质和地球化学专业一年级学生来说是一次地质启蒙教育，是一次重要的认识实习。除了老师的讲解和指导外，通过讨论课的形式，促使每位同学认真思考地质体和地质现象的地质作用过程，培养同学们独立思考的能力，努力使学生通过野外实习获得最好的学习和成长体验；不单纯强调知识和技能的传授，更加重视激励学生的好奇/自信/激情的内在发展动力与综合素质能力的培养。

**英文简介 (Course Description):**

Introduction to Field Geology is the basic experience in many undergraduate

geology programs, and is recommended for freshmen of the School of Earth and Space Sciences, Peking University. Except for the teacher's explanation and guidance, through the form of discussion seminar, each student is urged to seriously think about the geological process of geological data, cultivate the students' ability of independent thinking, and strive to make the students obtain the best learning and growth experience through field geology. It does not simply emphasize the knowledge and skills, but pays more attention to the internal development driving force of stimulating students' curiosity / confidence / passion and the cultivation of comprehensive quality and ability.

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**课程号 (Course Number):** 01231641

**课程名称 (Course Title):** 普通地质实习A讨论班/Seminar on field geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 董琳

**先修课程 (Prerequisites):** 无

**中文简介:**

普通地质野外教学实习对地球与空间科学学院地质和地球化学专业一年级学生来说是一次地质启蒙教育, 是一次重要的认识实习。除了老师的讲解和指导外, 通过讨论课的形式, 促使每位同学认真思考地质体和地质现象的地质作用过程, 培养同学们独立思考的能力, 努力使学生通过野外实习获得最好的学习和成长体验; 不单纯强调知识和技能的传授, 更加重视激励学生的好奇/自信/激情的内在发展动力与综合素质能力的培养。

**英文简介 (Course Description):**

Introduction to Field Geology is the basic experience in many undergraduate geology programs, and is recommended for freshmen of the School of Earth and Space Sciences, Peking University. Except for the teacher's explanation and guidance, through the form of discussion seminar, each student is urged to seriously think about the geological process of geological data, cultivate the students' ability of independent thinking, and strive to make the students obtain the best learning and growth experience through field geology. It does not simply emphasize the knowledge and skills, but pays more attention to the internal development driving force of stimulating students' curiosity / confidence / passion and the cultivation of comprehensive quality and ability.

-End-

**课程号 (Course Number):** 01231641

**课程名称 (Course Title):** 普通地质实习A讨论班/Seminar on field geology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 张元元

**先修课程 (Prerequisites):** 无

**中文简介:**

普通地质野外教学实习对地球与空间科学学院地质和地球化学专业一年级学生来说是一次地质启蒙教育，是一次重要的认识实习。除了老师的讲解和指导外，通过讨论课的形式，促使每位同学认真思考地质体和地质现象的地质作用过程，培养同学们独立思考的能力，努力使学生通过野外实习获得最好的学习和成长体验；不单纯强调知识和技能的传授，更加重视激励学生的好奇/自信/激情的内在发展动力与综合素质能力的培养。

**英文简介 (Course Description):**

Introduction to Field Geology is the basic experience in many undergraduate geology programs, and is recommended for freshmen of the School of Earth and Space Sciences, Peking University. Except for the teacher's explanation and guidance, through the form of discussion seminar, each student is urged to seriously think about the geological process of geological data, cultivate the students' ability of independent thinking, and strive to make the students obtain the best learning and growth experience through field geology. It does not simply emphasize the knowledge and skills, but pays more attention to the internal development driving force of stimulating students' curiosity / confidence / passion and the cultivation of comprehensive quality and ability.

-End-

**课程号 (Course Number):** 01231912

**课程名称 (Course Title):** 五台山地区综合地质实习/Geology Excursions in the Wutai Region

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 张波

**先修课程 (Prerequisites):** 地球科学概论，普通岩石学，地球化学，构造地质学

**中文简介:**

五台山综合野外地质实习是在野外地质认知实习及相关专业课室内学习基础上，为训练学生野外地质考察的综合能力及在变质岩区进行岩石和构造研究能力而设置的。每年6月底到7月初在五台山—恒山地区工作1.5周。实习考察8条路线30个观测点。

**英文简介 (Course Description):**

The geology excursions in Wutai region is for the undergraduate students, who finished the field training after the "general geology" course. This course will focus on the basic training of geologic investigation, including various types of rocks and structure geology reconstruction, especially in the high grade metamorphic area. All students will stay at Wutai-Hengshan area for ten days, and go across 5 long cross-sections and examine about 30 stops.

-End-

**课程号 (Course Number):** 01231916

**课程名称 (Course Title):** 五台山地区综合地质实习讨论班/Geology Excursions in the Wutai Region

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 张波

**先修课程 (Prerequisites):** 与矿物学, 岩石学几构造地质学等相关课程

**中文简介:**

五台山综合野外地质实习讨论班包括实习讲座及野外实习期间的小班讨论课, 是在野外地质认知实习及相关专业课室内学习基础上, 为训练学生野外地质考察的综合能力及在变质岩区进行岩石和构造研究能力而设置的。每年6月底到7月初在五台山—恒山地区工作1.5周。实习考察8条路线30个观测点。

**英文简介 (Course Description):**

Seminar during the geology excursions in Wutai region is for the undergraduate students, who finished the field training after the "general geology" course. This course will focus on the basic knowldge of the filed trip and discussion about the observation in the field. This seminar provide basic training of geologic investigation, including various types of rocks and structure geology reconstruction, especially in the high grade metamorphic area. All students will stay at Wutai-Hengshan area for ten days, and go across 5 long cross-sections and examine about 30 stops.

-End-

**课程号 (Course Number):** 01231916

**课程名称 (Course Title):** 五台山地区综合地质实习讨论班/Geology Excursions in the Wutai Region

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 魏春景

**先修课程 (Prerequisites):** 与矿物学, 岩石学几构造地质学等相关课程

**中文简介:**

五台山综合野外地质实习讨论班包括实习讲座及野外实习期间的小班讨论课, 是在野外地质认知实习及相关专业课室内学习基础上, 为训练学生野外地质考察的综合能力及在变质岩区进行岩石和构造研究能力而设置的。每年6月底到7月初在五台山—恒山地区工作1.5周。实习考察8条路线30个观测点。

**英文简介 (Course Description):**

Seminar during the geology excursions in Wutai region is for the undergraduate students, who finished the field training after the "general geology" course. This course will focus on the basic knowledge of the field trip and discussion about the observation in the field. This seminar provide basic training of geologic investigation, including various types of rocks and structure geology reconstruction, especially in the high grade metamorphic area. All students will stay at Wutai-Hengshan area for ten days, and go across 5 long cross-sections and examine about 30 stops.

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**课程号 (Course Number):** 01231916

**课程名称 (Course Title):** 五台山地区综合地质实习讨论班/Geology Excursions in the Wutai Region

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 张进江

**先修课程 (Prerequisites):** 与矿物学, 岩石学几构造地质学等相关课程

**中文简介:**

五台山综合野外地质实习讨论班包括实习讲座及野外实习期间的小班讨论课, 是在野外地质认知实习及相关专业课室内学习基础上, 为训练学生野外地质考察的综合能力及在变质岩区进行岩石和构造研究能力而设置的。每年6月底到7月初在五台山—恒山地区工作1.5周。实习考察8条路线30个观测点。

**英文简介 (Course Description):**

Seminar during the geology excursions in Wutai region is for the undergraduate students, who finished the field training after the "general geology" course. This course will focus on the basic knowledge of the field trip and discussion about

the observation in the field. This seminar provide basic training of geologic investigation, including various types of rocks and structure geology reconstruction, especially in the high grade metamorphic area. All students will stay at Wutai-Hengshan area for ten days, and go across 5 long cross-sections and examine about 30 stops.

-End-

**课程号 (Course Number):** 01231916

**课程名称 (Course Title):** 五台山地区综合地质实习讨论班/Geology Excursions in the Wutai Region

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 张贵宾

**先修课程 (Prerequisites):** 与矿物学, 岩石学几构造地质学等相关课程

**中文简介:**

五台山综合野外地质实习讨论班包括实习讲座及野外实习期间的小班讨论课, 是在野外地质认知实习及相关专业课堂内学习基础上, 为训练学生野外地质考察的综合能力及在变质岩区进行岩石和构造研究能力而设置的。每年6月底到7月初在五台山—恒山地区工作1.5周。实习考察8条路线30个观测点。

**英文简介 (Course Description):**

Seminar during the geology excursions in Wutai region is for the undergraduate students, who finished the field training after the "general geology" course. This course will focus on the basic knowledge of the filed trip and discussion about the observation in the field. This seminar provide basic training of geologic investigation, including various types of rocks and structure geology reconstruction, especially in the high grade metamorphic area. All students will stay at Wutai-Hengshan area for ten days, and go across 5 long cross-sections and examine about 30 stops.

-End-

**课程号 (Course Number):** 01231916

**课程名称 (Course Title):** 五台山地区综合地质实习讨论班/Geology Excursions in the Wutai Region

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 0

**授课教师 (Faculty):** 李秋根

**先修课程 (Prerequisites):** 与矿物学, 岩石学几构造地质学等相关课程

**中文简介:**

五台山综合野外地质实习讨论班包括实习讲座及野外实习期间的小班讨论课, 是在野外地质认知实习及相关专业课室内学习基础上, 为训练学生野外地质考察的综合能力及在变质岩区进行岩石和构造研究能力而设置的。每年6月底到7月初在五台山—恒山地区工作1.5周。实习考察8条路线30个观测点。

**英文简介 (Course Description):**

Seminar during the geology excursions in Wutai region is for the undergraduate students, who finished the field training after the "general geology" course. This course will focus on the basic knowledge of the field trip and discussion about the observation in the field. This seminar provide basic training of geologic investigation, including various types of rocks and structure geology reconstruction, especially in the high grade metamorphic area. All students will stay at Wutai-Hengshan area for ten days, and go across 5 long cross-sections and examine about 30 stops.

-End-

**课程号 (Course Number):** 01233170

**课程名称 (Course Title):** 地震概论/Introduction to Seismology

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 赵克常

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程是为全校学生开设的素质教育通识课程, 具有典型的自然科学课程的特征。它简明扼要地介绍了地震学的基本概念以及研究的方法, 内容包括地震学史、地震仪原理与地震图、地震波的传播理论、地球内部结构、勘探地震学、地震预报、临震措施和地震学最新进展。通过本课程的学习, 提升学生的自然科学的素质, 增强学生的抗震减灾意识以及提升学生的临震逃生能力。

**英文简介 (Course Description):**

As a general education course aimed at all the students at the campus for promoting quality-oriented education, Introduction to Seismology is characterized by its typical natural science features. The course provides a brief introduction to basic concepts and research methods of seismology, which covers Seismology history, seismograph principles and seismogram, seismic waves propagation theories,

interior Earth structure, exploration seismology, earthquake prediction, imminent earthquake measures and recent advances in seismology. This course enables the students to promote their quality of natural science, enhance their awareness of earthquake resistance and disaster mitigation and improve their skills for imminent earthquake escape.

-End-

**课程号 (Course Number):** 01233660

**课程名称 (Course Title):** 地球物理野外实习/Geophysical Field Practice

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 宁杰远

**先修课程 (Prerequisites):** 高等数学、普通物理、数学物理方程、地球介质力学、地震学、普通地质学

#### **中文简介:**

地球物理学是一门强烈依赖于观测资料的学科，通过对大量观测资料的分析，发现新现象、产生新理论，从而不断发展。本课程的目的：学生通过野外观测与资料处理的实际操作，加深对理论知识的理解，初步掌握获取资料、处理资料，解释资料的能力，培养发现问题、解决问题的能力，为进一步在地球物理学及相关领域开展科研工作奠定基础。主要内容包括：地表地质现象的考察；地球物理前沿处理技术学习；地震观测台阵的设计及地震观测；地震观测资料处理和解释。

#### **英文简介 (Course Description):**

Geophysics strongly depends on observation data. Based on analysis of the observation data, finding new phenomena, producing new theories, then achieving continuous development. The purpose of this course is that by field observation and data processing students deepen their understanding of theoretical knowledge, primarily grasp the ability of data acquiring, processing and explanation, strengthen their capability of finding and solving questions, which are all needed for their future work. Main contents include geology survey, advanced technology study, seismic array design, and seismic data processing and explanation.

-End-

**课程号 (Course Number):** 01235260

**课程名称 (Course Title):** 3S野外综合实习/Practice on RS, GIS and GPS

**开课院系 (School/Department):** 地球与空间科学学院/School of Earth and Space Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 田原

**先修课程 (Prerequisites):** 《地理信息系统概论》;《遥感概论》;《地球科学导论》

**中文简介:**

通过在典型区域的野外综合实习,使学生了解3S综合实践应用的基本方法,培养学生的实际动手能力,帮助其深入理解和掌握所学的理论知识:

走出校门,置身于大自然之中,实地验证课堂上所学的地图学、自然地理基础知识和3S基本理论的过程。

将遥感、地理信息系统和全球定位系统所学的各种方法和理论应用于实际工作中,加深对基本理论知识的理解。

掌握自然地理野外调查的基本技能,培养和锻炼学生的动手和独立工作能力。

掌握综合利用遥感、地理信息系统和全球定位系统进行区域野外调查和专题遥感解译工作的基本方法和技术。

**英文简介 (Course Description):**

This mandatory class provides an integral field practice on GIS, RS, and GPS. The main contents of this class are data acquisition, route planning, field exploration, RS image interpretation, GPS navigation, and land survey. The students are required to comprehensively apply what they have learnt in GIS, RS, and GPS classes in practice to fulfill all the tasks, which will improve their understandings and application abilities of the basic knowledge.

-End-

**课程号 (Course Number):** 01533300

**课程名称 (Course Title):** 城乡地域空间认知实习/Regional Science: Practice of Theories and Models

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 阴劼

**先修课程 (Prerequisites):** 无

**中文简介:**

城乡地域空间认知实习是五年制城市规划专业本科教学的必要环节,是专业评估考察的内容。本实习选取京津冀都市圈作为基地。在启动阶段,以天津市及滨海新区、北京市、唐山市为主要基地开始系统性的实习教学。在条件成熟时,逐步扩展至石家庄、承德、张家口等城市,形成以京津唐为核心的京津冀都市圈实习基地。

(1) 以京津冀都市圈为教学实习基地,能够充分体现“坚持以地理学为基础的、理工结合的规

划教学科研体系”的城市规划专业办学特色，发挥我系在中国城市化、区域研究与规划、创新空间与创新群体、经济地理等城市规划领域的长项研究，通过连续的教学实习，可以达到教学相长的效果。

(2) 京津冀环渤海城市群是中国目前已形成三大城市群之一，天津滨海新区作为全国综合配套改革试验区，起着探索新的区域发展模式、为全国发展改革提供经验和示范的作用。以此区域作为实习基地，有利于学生了解我国城市化进程中的最前沿问题。

(3) 京津冀都市圈内的城市，在性质、规模、产业、历史、文化等方面各有特点，利于根据教学任务的调整组织实习路线。

(4) 京津冀都市圈以北京为中心，远近适宜，交通发达，利于实习的开展。

近年来，我院的城市与区域规划系及城市与经济地理学系等承担了天津大港城市总体规划、土地利用总体规划等工作，也承担了京津冀都市圈其它城市的多项规划研究项目（如：北京市土地利用总体规划、河北迁安城乡一体化规划等）。同时，北京大学与天津签署了积极参与服务天津滨海新区建设的备忘录，为滨海新区的开发开放和可持续发展提供科技和智力支撑，使京津冀都市圈作为我院的实习基地有着良好的基础与前景。

我系已经与天津市规划局、天津经济技术开发区（泰达）就共建教学实习基地达成合作意向。

#### **英文简介 (Course Description):**

N/A

-End-

**课程号 (Course Number):** 01535130

**课程名称 (Course Title):** 野外生态学/Field Ecology

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 朱彪，唐志尧，吉成均

**先修课程 (Prerequisites):** 植物学（下）、普通生态学1、普通生态学2

#### **中文简介:**

野外生态学是生态学专业必修的野外实习课程，本课程以河北坝上北京大学生态系统观测站为基地，沿几个重要的地理因子（气候、植被、土壤）的梯度设计了多条线路，旨在通过讲授和实习相结合，培养学生观察野外生态现象，掌握野外调查方法以及提出科学问题的能力

在实习中，学生通过对八条实习路线上的不同地理、植被、土壤格局的观察和相关数据的获取，深入认识格局的特征及内在机制，提出科学问题和假说，并在条件允许的情况下对这些问题和假说进行回答和验证。在获取的数据的基础上，综合分析实习区的地理和生态现象。在这一过程中，学生需要综合运用知识和数据，对具有地区特色的问题进行思考和分析，并选择合适的题目撰写论文。

#### **英文简介 (Course Description):**

Field Ecology is designated to train students the skills of observing, measuring and recording ecological phenomena, and the ability of putting forward scientific

questions. It is obligatory for students majoring in Ecology. The field course is based on the Peking University Saihanba Ecological Observatory in Hebei Province. Eight field routes are designed to following the gradients of four main determinants in this region: climate, vegetation, soil and human disturbance. The students are required to record vegetation, soil data along the eight routes in groups, leading by the teacher and teaching assistants. The field data are integrated for testing the hypothesis put forward in the field observations. Each student has to submit a final report in the form of academic paper with part of the field data and their knowledges in ecology.

-End-

**课程号 (Course Number):** 01536840

**课程名称 (Course Title):** 环境科学野外综合实习/Field Practice of Environmental Sciences

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 李喜青

**先修课程 (Prerequisites):** 普通化学

#### 中文简介:

该项暑期课程突出将课堂基础教学、模拟效果演示与野外现场实践、动手操作活动相结合。选课学生在各相关专业教师具体指导下,在前期课堂理论、原理学习与基础操作技能培训的基础上,课程后期在代表性的野外现场亲身参与综合实习活动,具体包括:大气、水体、土壤、沉积物和生物等多介质环境样品的采集(包括器具、装备的准备和使用;目标区域选择、样点布设和定位)、各类样品前处理(分离、提取、净化、浓缩等)和检测工作,最终完成翔实、科学的实习报告。本课程与环境监测与实验、水环境化学、土壤环境化学、环境毒理学、环境风险评价等相关课程相互衔接和补充,通过多介质环境的综合性实验设计,培养学生针对环境科学问题进行综合分析、研究的思路和方法,理解和掌握探讨环境污染来源与产生、迁移/转化等归趋行为、及其生态毒理学效应的定性定量研究的技术和手段,以及实验分析数据的获取、处理方法,加深对环境科学的认识,提高学生综合分析问题和解决问题的能力。

#### 英文简介 (Course Description):

The course is highlighted by combination of class teaching and simulation show with field practice and operation. The students, under the instruction by the specific tutors and on the basis of previous study and training on theories, principles and manipulative skills in class, will participate in various sampling and pretreatment activities in the field. The practices include collection of atmospheric, water, soil and biotic samples (involving preparation and use of different devices and appliances, selection of target area, assignment and localization of sampling sites), pretreatment of different samples (such as separation, extraction, purification, concentration and so on) and preliminary measurements, and then finish the final summary reports. The course is connected and supplied with other courses, for example, environmental monitor and experiment, aquatic environmental chemistry, soil environmental chemistry, ecotoxicology and

risk assessment. By multidiscipline experiment design in multimedia environments, the students will receive the training for comprehensively analyzing and studying the environmental problems by different ways and routes, and understand and handle the qualitative and quantitative technologies for the fate (e.g., source, formation, transport and transform) of various pollutants and their ecotoxicological effects, as well as the acquirement and compile means for data. Accordingly, course studying will deepen the knowledge of environmental sciences, and enhance the whole ability for analyzing and resolving the real problems.

-End-

**课程号 (Course Number):** 01537530

**课程名称 (Course Title):** 普通地质实习/Field Practice of Physical Geology

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 张家富

**先修课程 (Prerequisites):** 普通地质学

#### 中文简介:

地球概论野外实习课是为环境学院本科生和研究生开设的野外实习课。要求选修本课程的学生上个学年(近期)选修过“地球概论”或“普通地质学”。“地球概论”课是为北京大学地理、环境等非地质专业本科生开设的有关地球科学,特别是关于地壳的组成、构造和演化知识的基础课,课程由三部分核心内容构成:(一)地壳的物质组成,讲述矿物和岩石学基本内容,认识重要的常见矿物和岩石;(二)地壳的地质构造,介绍有关地质构造和大地构造的基本知识,重点学习褶皱构造、断层构造,以及板块构造学说;(三)地壳演化简史。

#### 英文简介 (Course Description):

Field practice of Earth Sciences

-End-

**课程号 (Course Number):** 01539340

**课程名称 (Course Title):** 地貌实习/Field Practice of Geomorphology

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 张家富

**先修课程 (Prerequisites):** 地貌学

### 中文简介:

实习地区主要包括山西大同盆地、河北秦皇岛地区。大同盆地是我国地貌类型丰富（包括山地、平原、河流、火山、冲积扇、各种黄土地貌和新构造活动形迹及地貌，丰富的新生代沉积类型和良好的露头剖面）、丰富的历史人文景观，同时是我国重要的能源化工基地而又地处我国的生态脆弱地带，具有长期的地貌学研究历史和良好的研究基础，因而是我国最理想的地貌学教学实习地区。秦皇岛地区拥有十分齐全和典型的海岸地貌组合以及典型的滨海平原和具有特色的基岩山地地貌，而且是我国十分重要的港口城市 and 最重要的海滨旅游城市。两个地区包括了属于地貌学研究对象的大部分地貌类型和地貌过程。通过本次实习课程的学习，学生在教师指导下，系统学习和掌握地貌学野外研究的基本方法。包括如何围绕研究目的，收集和相关文献，制定野外考察和研究方案；针对各种宏观和微观的地貌现象，如何观察、测量、分析、研究、描述和记录；资料整理、分析研究、图表绘制、研究报告撰写等。通过实习，还可以对自然地理、经济地理、历史与人文地理、风景旅游、资源开发与环境保护等问题获得较多的感性认识。

### 英文简介 (Course Description):

The areas for the field training included Datong Basin in Shanxi Province and Qinhuangdao City in Hebei Province. In Datong Basin there are many types of landforms such as maintains, plain, rivers, alluvial fans, and different types of typical loess landforms. There are also lots of phenomena of neotectonic movements and neoteconic landforms, such as fault scarps, fault grabens or horsts, volcano cones, basaltic lava platforms or ridges. And there are also many different types of Cenozoic sediments and many good geologic outcrop sections. There are also very rich in historic and cultural scenic spots. The region is one of the most important energy sources and chemical industry of China though it is an ecologically fragile region. The region of Qinhuangdao City is a coastal region, which included almost all types of coastal landforms, typical coastal plain and unusual beautiful mountains. Qinhuangdao City is one of the most important tourist city as well as a famous historical cultural city and an important modern seaport. The two regions included most types of landforms and geomorphologic processes and evolutionary history. There is a long history of geomorphological and Quaternary and geographical research on the regions. So the regions are very idea for field training in geomorphology.

In the training course the students will systematically learn the field research methods of geomorphology, which include how to collect relevant literature materials, maps and other information, draw up a plan for the field investigation and research program, how to observe, measure, analyze, research, descript and to record the results, how to analyze the materials, draw maps and diagrams, and to write the research report of the regions based on the research purpose and under the guidance of teachers. From the training course the students can also get some perceptual knowledge of physical geography, economic geography, historical and cultural geography, scenery and tourist geography, resource exploitation, environmental and ecological sciences.

-End-

**课程号 (Course Number):** 01630081

**课程名称 (Course Title):** 健康人格心理学/Psychology of Healthy Personality

**开课院系 (School/Department):** 心理与认知科学学院/School of Psychological and Cognitive Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 杨眉(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

健康人格心理学是一门研究健康人格基本特点以及发展、变化的规律的科普性质的学科。本课以发掘学生的潜能和提升学生的生活质量和幸福感为目标。

本课是在人格心理学与临床心理学等相关学科的基础上发展出来的，通过对健康人格发展规律的经典理论的介绍，帮助学生了解自身的个性特点及其发展规律。使学生在自我认识与自我接纳的基础上更全面地认识与接纳他人。

**英文简介 (Course Description):**

Healthy Personality Psychology is a positivity-oriented study to research the nature and characteristics of healthy personality. This course is aiming to provide a better understanding of core concepts in the field, fulfill the students' potential and improve their sense of happiness and life quality.

This course is designed on the basis of personality psychology, clinical psychology and other related disciplines. It extracts 14 models of healthy personality from theories of 14 influential psychologists including Freud, each to be delivered from 3 aspects: the psychologist's biography, his conception of healthy personality and method to achieve that. With these efforts the lecturer is intended to help the students recognize their own personality and its development, actualize their best through self-awareness and self-acceptance, and at the same time learn to create and share a better life with others.

Course Philosophy: Psychology must contribute to the students' healthy growth and potential-realization. Psychology must contribute to students' life quality and sense of happiness. Psychology must contribute to the students' actualization of their best Self!

Course Model: Introduction of Healthy personality model + Training for core personal traits + Mobilization of students' self-awareness and self-education.

Course Hours: 32

-End-

**课程号 (Course Number):** 01630713

**课程名称 (Course Title):** 时间与认知/Time and Cognition

**开课院系 (School/Department):** 心理与认知科学学院/School of Psychological and Cognitive Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 包燕

**先修课程 (Prerequisites):** 普通心理学

**中文简介:**

时间在认知加工和日常生活中具有不可忽视的重要作用。本课程采用全英文教学方式, 通过围绕时序知觉、时距估计、感觉运动同步、主观现在、日节律等一些列专题的介绍与讨论, 旨在为学生提供时间与认知相关领域的广阔视角, 了解该领域的前沿问题和研究方法, 激发学生的好奇心和科学研究热情, 为其将来从事相关研究打下坚实基础。

**英文简介 (Course Description):**

Time is a fundamental aspect of cognitive processing and daily life. This course is a elective course designed for both undergraduate and graduate students, aiming to provide them broad viewpoints as well as advanced research on time-related essential topics such as temporal order perception, duration estimation, sensorimotor synchronization, subjective present, circadian rhythms etc..

-End-

**课程号 (Course Number):** 01630725

**课程名称 (Course Title):** 系统论与系统式心理治疗/Systems Theory and Systematic Psychotherapy

**开课院系 (School/Department):** 心理与认知科学学院/School of Psychological and Cognitive Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 李松蔚(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

作为一门科学的系统论 (System Approach), 是由美籍奥地利人、理论生物学家 L.Von.Bertalanffy 创立的。他在1968年出版的专著:《General System Theory: Foundations, Development, Applications》, 被认为是系统论的奠基之作。

系统是指由若干元素, 以一定结构形式联结构成的, 具有某种功能的有机整体。大至宇宙, 小至微观的原子, 都可以看成是一个系统。整个世界就是系统的集合。

系统论认为，开放性、自组织性、复杂性，整体性、关联性，动态平衡性，是所有系统共同的基本特征。系统论的核心思想是系统的整体观念。任何系统都是一个有机的整体，而不是各个部分的机械组合或简单相加，系统的整体功能是各元素在孤立状态下所没有的性质。同时，系统中各元素不是孤立的存在，每个元素在系统中都处于一定的位置，起到特定的作用。元素之间相互关联，构成了一个不可分割的整体。元素是整体中的元素。

系统论的研究对象是各种各样的系统。其基本思想方法，就是始终从整体出发，分析系统的结构和功能，研究系统、元素、环境三者的相互关系和变动的规律性。

系统论在自然科学和社会科学领域都得到了广泛应用。在社会生活中，人与人也组成了不同系统。一个家庭，一个企业，一所学校，一个国家……都可以从系统的角度加以研究，理解其规律。因此，出现了以系统思想为指导的心理学工作方法，例如系统式家庭治疗，系统式组织管理。这些方法与传统的心理学工作有本质区别。在引入系统的视角之后，对个体相互的行为，信息交换，认识论的形成等，往往会看到不一样的角度。

系统论的出现，使人类的思维方式发生了深刻变化。以往研究问题，一般是把事物分解成若干部分，分离出最简单的元素，然后以部分的性质去说明复杂事物。这种方法的着眼点在局部或元素，遵循的是线性因果决定论。它往往更适用于认识较为简单的事物，而不能胜任对复杂问题的研究。本课程旨在介绍系统论的基础思想，特别聚焦于系统论在心理学中的应用，帮助学生理解人类行为的系统性，开放性，和复杂性。并介绍控制论、信息论等其他新兴科学思想所提供的视角和方法，为理解和组织人类的行为开拓新思路。

#### **英文简介 (Course Description):**

System Approach, as a scientific theory, has been founded by the Austrian theoretical biologist, L.Von.Bertalanffy. His monograph published in 1968, "General System Theory: Foundations, Development, Applications", is considered to be the foundation of system theory.

The system is defined as an organism, composed of different elements, which function in a certain form. The universe, and micro atoms, can be viewed as systems. The whole world is a collection of systems.

The system theory holds that openness, self-organization, complexity, integrity, relevance and dynamic balance are common basic features of all systems. All system is an organic entirety, not a mechanical combination or a simple collection of all parts. The system functions according to the nature that none of the elements has an isolated state. Each element, in a certain position of the system structure, plays a specific role. The interconnections between elements constitute an inseparable entirety. Each element is an element in the entirety.

The systems theory investigates a variety of systems. The basic way of thinking is to analyze the structure and function of the system from the perspective of entirety, and analyze the relationship among the entirety, the elements, and the environment.

System theory has been widely used in the field of natural science and social science. In social life, people also form different systems, a family, an

enterprise, a school, or a country etc. The rules of system theory can also be applied in daily life. Therefore, psychological working methods have emerged with the perspective of the systematic thinking, such as systematic psychotherapy or management. These methods are essentially different from the traditional psychological work. The behavior, the information exchange, and the formation of epistemology could be organized from a new perspective.

The emergence of system theory has made a profound change in the way of thinking. During the past, the research methods usually divided the object into smaller parts, separating different elements, and then explaining the complexity as the collection of different parts. This method focuses on local, following the traditional causal-effect thinking. It is often more applicable to understand simpler things, but not to the complex problems.

This course aims at introducing the basic idea of system theory, especially focusing on the application of system theory in psychology. Students are expected to understand the systematicness, openness and complexity of human behavior from this course. Together with the perspectives and methods provided by other emerging scientific ideas such as cybernetics and information theory, new ideas for understanding and organizing human behavior can be opened up.

-End-

**课程号 (Course Number):** 01831990

**课程名称 (Course Title):** 跨文化交流学/Inter-cultural Communication

**开课院系 (School/Department):** 新闻与传播学院/School of Journalism and Communication

**学分 (Credits):** 2

**授课教师 (Faculty):** 李臻怡(校外) , 许静

**先修课程 (Prerequisites):** 无

#### 中文简介:

当今在“地球村”中，人们生活在跨文化交流日益频繁的社会环境里。跨文化的知识和能力是21世纪大学教育，特别是素质教育的内容之一。

本课的目的是：使选课者掌握“跨文化交流学” (Intercultural Communication)这一传播学分支的基本概念和基本理论，增加中外跨文化交流知识，提高跨文化交流技能，建立跨文化交流意识，培养分析和解决跨文化交流问题能力。

#### 英文简介 (Course Description):

In today's "Global Village", people are experiencing more frequent interaction across cultures. Knowledge and competence in intercultural communication are essential for 21st century university education, in particular as part of overall character development for the students.

The objective of this course is to equip the students with basic concepts and theories of Intercultural Communication as a branch of communication studies with enhanced knowledge, competence, and awareness, as well as analysis skills to resolve intercultural challenges.

-End-

**课程号 (Course Number):** 01832150

**课程名称 (Course Title):** 媒体与国际关系/Media and International Relations

**开课院系 (School/Department):** 新闻与传播学院/School of Journalism and Communication

**学分 (Credits):** 2

**授课教师 (Faculty):** 陈开和

**先修课程 (Prerequisites):** 不要求先修课程，但选课同学需阅读并熟悉现当代国际关系历史，并具有较好的英语阅读能力。

**中文简介:**

本课程将结合具体案例，帮助选课学生熟悉有关“媒体与国际关系”的主要理论视角，媒体在不同国际关系形态中发挥作用的主要方式，以及媒体在我国对外关系中的影响。

**英文简介 (Course Description):**

This course will familiarize students with the basic theoretical perspectives in the field of Media and International Relations. It will also introduce the roles that media play in major international relations formats like war, diplomacy and international public relations. In the final part, the course will discuss the relationship between media and China's foreign relations.

-End-

**课程号 (Course Number):** 01832910

**课程名称 (Course Title):** 视频编辑/Video Editing

**开课院系 (School/Department):** 新闻与传播学院/School of Journalism and Communication

**学分 (Credits):** 2

**授课教师 (Faculty):** 严富昌

**先修课程 (Prerequisites):** 无

**中文简介:**

了解视音频编辑的基本概念、基本流程、剪辑方法、特效合成和输出，熟悉Avid Media Composer非线性编辑软件的基本操作流程，以及前期拍摄设备的使用。培养学生掌握视频素材采集与管

理、视频剪辑、声音剪辑、运动特效及专场、字幕特效、色彩校正、视频输出等实践操作的技能。

**英文简介 (Course Description):**

This lesson help to students understand the basic concepts , the basic process of video editing, editing methods, effects compositing and output. We will learn and master the basic grammar non-linear editing commonly software in Avid Media Composer, and the use of early shooting equipment. We will understand master upload video clips, video editing, sound effects, subtitles, special effects, color correction, video output and other practical skills.

-End-

**课程号 (Course Number):** 01834110

**课程名称 (Course Title):** 数据新闻/Data Journalism

**开课院系 (School/Department):** 新闻与传播学院/School of Journalism and Communication

**学分 (Credits):** 2

**授课教师 (Faculty):** 许静, 叶韦明

**先修课程 (Prerequisites):** 无

**中文简介:**

欢迎选修《数据新闻》。我们生活在一个数字世界中，这个世界里几乎所有的事物都可以用数字来描述，我们所有的故事、历史、关系都可以用数字的形式来展现。在数字时代，数字新闻即在生产和发布新闻的过程中加剧使用数字信息知识与技能。它反映了内容生产和其他领域如设计、计算机科学和统计日益增加的互动。

本课程从介绍数据新闻开始，包括经典案例和知名的新闻编辑室；之后讲解如何获取数据、如何鉴别数据、如何清理数据；并从数据的描述和数据的分析两个角度，与学生一起实践，学习基于数据制作图表、地理信息图、及社会网络图；最后，基于理解和分析数据，发掘与读者互动的功能，并学会基于数据讲故事、写新闻。

本课程通过研究案例的分析、学生小组动手实践，帮助学生使用数据生产深度的内容产品。在课程中安排一次与中山大学数据实验室的教师和学生互动交流。

**英文简介 (Course Description):**

This course teaches some of the skills and techniques necessary for using statistical information effectively in science journalism. Obtaining, interpreting, visualizing and displaying data are essential skills for journalists in the 21st Century, especially those who cover scientific and technical subjects. Students will scrutinize techniques used in previously published projects and will also analyze data on their own, evaluating and producing tables, charts and diagrams using a variety of basic desktop software, web tools and basic scripting and programming.

Instructor: WeiMing YE  
Email: yewm@pkusz.edu.cn

-End-

**课程号 (Course Number):** 01834300  
**课程名称 (Course Title):** 媒体与中国社会/Media and Society in China  
**开课院系 (School/Department):** 教务部  
**学分 (Credits):** 3  
**授课教师 (Faculty):** 陈开和

**先修课程 (Prerequisites):** 不要求先修课程。选课同学事先对中国现当代历史应有所了解。

**中文简介:**

本课程将帮助学生学习和了解中国（包含中国大陆以及香港、台湾等地区）新闻与传播事业的总体情况，以及中国新闻传播政策的演变过程及相关影响因素。此外，课程将分析中国各类媒体（包括印刷媒体、电子媒体以及新兴的网络媒体等）的发展过程及其与中国社会的互动关系，同时探讨中国媒体在海外的影响力，以及海外媒体在中国的情况及对中国社会的影响。课程讲授方式包括教师讲授、以及相关的小组讨论/参观考察等。

**英文简介 (Course Description):**

This course offers a general overview of journalism and communications in China, with a focus on the Mainland China. Media in other parts of Greater China, including Hong Kong and Taiwan will also be addressed. It will analyze the features, developments and impact of various media: print, TV, radio, online media, and social media like Weibo and Wechat. Based on an understanding of the development and current media landscape, the course will take a comparative look into the role of the media in Chinese society. It will also look at how China is perceived in and outside China through the prism of the media, as well as how the outside world is covered by Chinese correspondents.

-End-

**课程号 (Course Number):** 01834310  
**课程名称 (Course Title):** 宏观经济报道: 理论、问题与新闻评论/Macroeconomic Reporting: Theory, Issues and Opinion Pieces  
**开课院系 (School/Department):** 新闻与传播学院/School of Journalism and Communication  
**学分 (Credits):** 2  
**授课教师 (Faculty):** 俞虹, 陈晋(校外)

**先修课程 (Prerequisites):** 无

### 中文简介:

做经济报道需要一定的知识储备,至少要熟悉经济领域的技术词汇和基本思维框架。这门课程致力于介绍做经济报道所需要的基本经济理论和概念,积累必要的技术知识(这本身就是一门语言),以便学生理解时事、关心时事,并逐渐形成自己的观点。课程通过让学生阅读从英文主要媒体精选的约40篇新闻评论了解世界动向,启发学生思考经济政策和社会现象。课程要求学生选择自己感兴趣的话题,练习用英文表达自己的见解,在边学习、边讨论、边练习的过程中熟悉宏观经济新闻报道与评论的写作过程和基本模式。

### 英文简介 (Course Description):

This course is designed to equip students with basic economic concepts and theoretical framework for thinking about some of the important issues of the day, as reported and commented in major English media outlets. By studying more than 40 op-ed pieces by some well known economists, policymakers and journalists, I hope to acquaint students with the best minds of American columnists. These op-ed pieces cover some of today's intensely debated issues: trade wars, internationalization of the RMB, macroeconomic policy adjustments through monetary and fiscal policies. My role will be to help students understand the issues under debate, the purpose of writing, the internal logic of each author's argument, and stimulate students to think about why these pieces are well argued and well written. I will lead students to appreciate the subtleties in these articles which most effectively reflect the author's intentions. Some optional readings are listed at the end of each week's teaching schedule for those students who are interested in more depth of the subject matters. They range from academic papers to policymakers' speeches and to industry research by practitioners.

-End-

**课程号 (Course Number):** 01834343

**课程名称 (Course Title):** 中国媒体市场与媒体战略/Media Market and Media Strategy in China

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 王天夫

**先修课程 (Prerequisites):** 无

### 中文简介:

媒体行业一直是应用新科学技术的先行者。每一轮科技创新都深刻地变革重塑了媒体产业格局,电报、广播、电视、计算机、互联网、移动通讯、人工智能科技,无不如此。而广告作为整个媒体经济的支撑者,也必须为应对更复杂的媒体环境而改变。当前广告媒体市场呈现了以移动互联网为核心,多媒体融合,传统媒体数字化的新产业格局。无论是作为品牌、代理、还是媒体,都需要采取整合营销传播的视角,充分协调利用好各种媒体的特性,以在嘈杂的信息环境

中提升广告传播效果。

中国在人工智能技术与数字商业模式的创新上处于世界领先水平。中国媒体市场呈现出了不同于国际媒体市场的特征。因此，品牌必须相应地制定出符合中国媒体市场的策略。本课程将引导学生了解广告媒体的基本理论模型和实践流程，熟悉各种媒体的特性，形成统筹协调各类媒体的战略能力。

**英文简介 (Course Description):**

The media industry has always been at the forefront of adopting new technologies. Each round of technological innovation has profoundly transformed the media industry landscape, including telegraph, radio, television, computers, the Internet, mobile communications, and artificial intelligence. Advertising is the foundation of the media industry. It must adapt to the complex and ever-evolving media environment weaved by emerging technology. Marketers, agencies, and media need to adopt an integrated marketing communication approach to fully coordinate and utilize the characteristics of various media to achieve the maximum impact of marketing communication in a noisy environment.

China is one of the leaders in the innovation of artificial intelligence technology and digital business models. The Chinese media market has unique characteristics that set it apart from the international media market, and therefore, marketers must develop strategies that align with the Chinese media market. This course aims to guide students in understanding the basic theoretical models and practical processes of advertising and the media market, familiarizing them with the features of various media and enhancing their strategic integration and coordination capabilities.

-End-

**课程号 (Course Number):** 02031540

**课程名称 (Course Title):** 中国古代文化/Ancient Chinese Culture

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 廖可斌

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程拟分若干专题，比较系统地介绍中国古代文化的各个主要方面，使学生对中国古代文化的整体框架、基本特征及当代意义有基本了解。本课程注重介绍中国古代文化相关知识，同时强调问题意识、比较视野、当代视角，即从中国古代文化的历史现象中提炼出若干问题，注重中外文化特别是中欧文化的比较，探讨中国古代文化对中国历史发展的影响及其当代价值。

**英文简介 (Course Description):**

This course includes several topics and systematically introduces the main aspects of ancient Chinese culture, aiming to make students get a basic understanding of the framework, characteristics and contemporary significance of ancient Chinese culture. While focusing on knowledge relating to ancient Chinese culture, this course also lays emphasis on problem consciousness, comparative vision and contemporary perspective. Specifically, it emphasizes generalizing several important aspects of ancient Chinese culture from historical phenomena, and comparing Chinese culture with foreign cultures, especially European ones, and exploring how ancient Chinese culture influences Chinese history and what's its contemporary value.

-End-

**课程号 (Course Number):** 02034960

**课程名称 (Course Title):** 经学通论/General Theory of Classical Confucianism

**开课院系 (School/Department):** 中国语言文学系/Department of Chinese Language and Literature

**学分 (Credits):** 2

**授课教师 (Faculty):** 顾永新

**先修课程 (Prerequisites):** 现代汉语

古代汉语

**中文简介:**

中国文化以儒家思想为主体，而儒家思想的直接载体就是儒家经典，其书称作经书，其学称作经学。不读经书，就不能了解儒家思想；不了解儒家思想，就无法认识中国文化。所以，认识中国文化须从儒家经典开始。广义的经学，统摄于儒学之下，是儒家学术的正统。它直接表现为一种实践伦理学，同时也是一种政治哲学，推己及人，修身齐家，经世致用。作为狭义的学术范畴，经学包括对儒家经典文本的思想义理的研究，名物典制、章句训诂的研究，经书的文献学研究，以及经学家和经学流派的研究，经学发展、演变的历史的研究，经学与其他学术门类相互之间关系的研究等等。在“五四”以前中国两千多年的历史长河中，所谓学术就是以经学为主干，学人以名列儒林为荣，著述以敷赞经典为贵，派别纷繁，训解浩瀚，构成了中国古代学术史的核心和发展的主线，也是中国古代社会主流意识形态的代表形式，对于学术、文化乃至政治经济、社会生活的发展都有着深刻的影响，也对古代朝鲜、日本等周边国家产生了重大影响。

“经学通论”课程拟从讲授经学范畴的内涵和外延入手，旁及经学史的演进轨迹和经学文献的主干系统（严格辨析经学、经学史和经学文献），以十三经的成书源流、内容构成、思想旨趣及历代整理研究成果为主，辅以经书文本的讲读。

**英文简介 (Course Description):**

Chinese culture is generally seen as being rooted in Classical Confucianism, of which the Five Classics are the basic texts. With particular emphasis on the importance of the family and social harmony, the core of Classical Confucianism is humanistic. In its widest sense, Classical Confucianism is described as an ethics and even a way of governing. In its limited sense, it is a study on Confucian classic texts. It is related to historiography, philology, philosophy and bibliography. It has great impact on Chinese traditional culture, politics and social life. Even Japan and Korea, included in the Chinese cultural sphere, are also strongly influenced by Classical Confucianism.

Our course is starting with the introduction of Classical Confucianism, focusing on the texts of Thirteen Classics. We are going to depict the history of how Classical Confucianism has been developing during the last over 2000 years, and discuss how to understand and study Classics.

-End-

**课程号 (Course Number):** 02131400

**课程名称 (Course Title):** 埃及学专题/Introduction to Egyptology

**开课院系 (School/Department):** 历史学系/Department of History

**学分 (Credits):** 2

**授课教师 (Faculty):** 颜海英, 薛江

**先修课程 (Prerequisites):** 无

#### **中文简介:**

本课程以埃及学的重大研究课题为线索, 介绍古埃及文明(公元前3000年—公元7世纪)的发展历程与文化成就。从语言文字、神话思想、王权观念、艺术风格等方面剖析古埃及文明的特质。并介绍该学科的现状、最新研究动态和未来发展趋势。

古埃及文明以物质上的高度发达和宗教在各文化领域的渗透为主要特色。前者体现为政治上的长期统一与稳定、完备的中央集权制度、帝国的建立与扩张, 以及建筑、艺术的丰富遗留、语言和文学的高度发展, 等等。后者体现为政权与神权的紧密结合, 宗教的大众化、仪式化, 以及独特的建筑和艺术风格、生活方式和习俗等, 也反映在以来世为中心的宗教信仰中。

#### **英文简介 (Course Description):**

Introduction to ancient Egyptian civilization, including its history, language, art and architecture, and its cultural contact with Mesopotamia, its influence to classical world.

-End-

**课程号 (Course Number):** 02333233

**课程名称 (Course Title):** 《周易本义》精读/In-depth Reading of ZhouYiBenYi

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 王鑫

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程是为古典语文班开设的典籍精读课。课程以朱子易学为中心，在仔细研读《周易本义》基础上，揭示朱子易学解释的基本特点以及其中所蕴含的哲学思想。

**英文简介 (Course Description):**

This course is designed for the students of Classics and Philology Program to intensively read the Chinese classics. Focusing on Zhuxi's studies of I ching, the course reveals the basic characteristics of the explanations of I ching by Zhuxi and the underlying philosophy and thoughts based on in-depth reading of ZhouYiBenYi .

-End-

**课程号 (Course Number):** 02432090

**课程名称 (Course Title):** 本土视野下的中国外交与国际事务/Chinese Perspective on International and Global Affairs

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 陈长伟

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程将在本土视野之下介绍中国外交与国际事务的互动关系，分析中国如何通过全面参与国际和全球事务为国内经济与社会发展营造有利的外部环境，以及该过程如何影响了中国自身的政治和外交行为。本课程分导论、主体和结论三部分。导论部分将介绍中国外交与国际事务研究的主要学习方法，主体部分讨论当代中国对外关系的主要理论与现实问题，包括中国对外关系的历史背景、民族主义和公众舆论对中国对外政策的影响、中国对外政策的决策机制、主要决策者及其风格分析、中国和全球治理、中国和世界经济、中国的软实力建设和公共外交、中国的周边外交战略、以及学术界关于中国对外政策分析中的若干理论争鸣。结论部分则尝试对中国未来的国际地位进行前瞻性的讨论。

**英文简介 (Course Description):**

This undergraduate lecture course is designed to survey major topics of the international relations of the People's Republic of China with a specific focus on Chinese perspective. With a brief introduction of major theoretical perspective on

foreign policy studies, the main body of the course is organized around special topics of Chinese foreign policies, including the Chinese historical legacy and its impact on China's foreign policy, nationalism and public opinion in contemporary China, mechanism of China's foreign-policy decision-making, leaders and their styles, China's attitudes towards global governance, the economic dimension of China's interactions with the outside world, public diplomacy and China's soft power and China's policy towards peripheral countries, (in particular, the Northeast Asia and the South China Sea). This course pays attention to the application of different international relations theories to the problems under study. The course aims to acquaint students with knowledge of China's involvement in world affairs in historical and contemporary perspectives and train them with an analytical understanding of the dynamics of China's foreign policy.

-End-

**课程号 (Course Number):** 02432140

**课程名称 (Course Title):** 中国政治与公共政策/Chinese Politics and Public Policy

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 雷少华

**先修课程 (Prerequisites):** 无

**中文简介:**

这门课是针对本科生，尤其是本科留学生特点开设。课程将全面介绍当代中国政治以及公共决策过程。这门课强调中国政治结构，国家与社会的关系。学生将初步了解当代中国政府、政治与社会，并理解当代中国政治与社会各种决策以及社会问题的背景以及处理方法。例如社会运动、环境保护、计划生育、经济改革、政治发展等不同领域。通过这门课的学习，学生全面了解中国政治与社会。

**英文简介 (Course Description):**

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

-End-

**课程号 (Course Number):** 02532600

**课程名称 (Course Title):** 经济学原理/Principle of Economics  
**开课院系 (School/Department):** 经济学院/School of Economics  
**学分 (Credits):** 3  
**授课教师 (Faculty):** 张元鹏

**先修课程 (Prerequisites):** 微积分、线性代数

**中文简介:**

经济学包括微观经济学和宏观经济学。本课程主要讲授微观经济学的有关内容。其研究对象是单个家庭、单个企业、单个市场。主要研究消费者行为，生产者行为，市场均衡以及垄断等问题，它还试图说明现代经济中市场机制的政府的作用。

**英文简介 (Course Description):**

Economics includes microeconomics and macroeconomics. This course mainly teaches the fundamentals of microeconomics. Topics include consumer theory, producer theory, the behavior of firms, market equilibrium, monopoly, and the role of the government in the economy.

-End-

**课程号 (Course Number):** 02533710  
**课程名称 (Course Title):** 会计学原理/Principle of Accounting  
**开课院系 (School/Department):** 经济学院/School of Economics  
**学分 (Credits):** 3  
**授课教师 (Faculty):** 张元鹏

**先修课程 (Prerequisites):** 在学习《会计学原理》之前，学生们最好能先修《经济学原理》、《金融学原理》等主干课。

**中文简介:**

会计学原理主要讲述会计概论、会计科目与复式记账，会计凭证，会计账簿，流动资产，长期资产，负债，所有者权益，费用与成本，收入与利润，财务报表，会计管理等内容，结合中国资本市场上市公司的案例，尽量做到生动有趣。

**英文简介 (Course Description):**

Accounting principles mainly about accounting introduction, accountant course and double entry accounting, and accounting vouchers, account books, current assets, long-term assets, liabilities, owner`s equity, expenses and costs, income and profits, financial statements, accounting management content, with China`s capital market of the listed company of case, try to be lively and interesting.

-End-

**课程号 (Course Number):** 02534380

**课程名称 (Course Title):** 应用经济计量/Applied Econometrics

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 秦雪征

**先修课程 (Prerequisites):** This course is intended for the upper undergraduate students in Economics, Business or other social science majors. Graduate students are also welcome. Prior training in Introductory Econometrics or Statistics is required. The main focus of the course is to use econometric tools to solve real-world problems, and thus we will not spend much time on the mathematical derivation of basic models.

**中文简介:**

本课程旨在系统介绍计量经济学的常用研究方法，并培养学生独立运用计量经济模型及计算机软件分析解决实证经济问题的能力。课程主要涵盖以下内容：线性回归和函数形式的选取，异方差和序列相关性，基础和高级时间序列模型，混合横截面和面板数据模型，离散选择模型，内生性和工具变量估计，联立方程模型等。实现以上模型所需要的计算机编程技术（SAS软件）也将在课上讲授。同时，学生将有机会独立使用现实经济数据进行项目研究，从而提高自己的科研能力。

**英文简介 (Course Description):**

This course provides you with a general understanding of the econometric modeling tools that are frequently used in the empirical economic studies. The topics covered include linear regressions and the selection of functional forms, heteroskedasticity and serial correlation, basic and more advanced time series techniques, pooled cross-sectional and panel data models, models for binary choice and limited dependant variables, endogeneity and instrumental variable estimation, simultaneous equation models, etc. The computer programming techniques that are needed to implement the above models will also be taught using SAS software. In addition, you will get a taste of empirical research using the real-world data by conducting an independent research project.

-End-

**课程号 (Course Number):** 02535030

**课程名称 (Course Title):** 企业全面风险管理/Enterprise Risk Management

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 陈凯

**先修课程 (Prerequisites):** Risk Management, Finance, Calculus, Probability

**中文简介:**

Enterprise Risk Management在国内被翻译为全面风险管理或企业全面风险管理。本课程在讨论企业全面风险管理的框架基础上,介绍企业全面风险管理在实务中的需要和应用。本课程将分别从企业全面风险管理的概念、改革、模型、应用和未来进行阐述,要求同学们在了解企业全面风险管理的概念和框架的同时,掌握其模型和应用。同学会被要求以小组为单位解决一些实务问题,并给出课题报告。

**英文简介 (Course Description):**

Enterprise risk management is a complex yet critical issue that all companies must deal with as they head into the twenty-first century. It empowers you to balance risks with rewards as well as people with processes. But to master the numerous aspects of enterprise risk management, you must first realize that this approach is not only driven by sound theory but also by sound practice.

This course is based on the framework of Enterprise Risk Management. It also introduces the models and applications of Enterprise Risk Management. The scheme of the course is followed by introduction, reform, model, application and future of Enterprise Risk Management.

It requires students not only to understand the concepts and framework of Enterprise Risk Management, but also to master the risk management model and applications in the real world. Students are required to finish a group project and present the report at the end of the course.

-End-

**课程号 (Course Number):** 02535510

**课程名称 (Course Title):** 新结构智库实践/NSE Academic Think Tank Practice

**开课院系 (School/Department):** 经济学院/School of Economics

**学分 (Credits):** 3

**授课教师 (Faculty):** 赵秋运, 于佳

**先修课程 (Prerequisites):** 《新结构经济学导论》

**中文简介:**

《新结构智库实践》课程是面向本科生和研究生所开设的政策研究实践课程,该课程秉承“知成一体”的理念,旨在为学生在掌握新结构经济学基本理论的基础上,创造认识世界、改造世界一体的实践机会。该课程基本目标是运用新结构经济学理论工具和实践方法论,从现象出发,获取对现实世界经济结构变迁和政策方案的最大化理解。

**英文简介 (Course Description):**

This course introduces NSE academic think-tank practice to senior undergraduate and graduate students. It consists of a theory section that introduces methodology for think-tank practice based on New Structural Economics and a practice section that provides students with opportunities to participate in actual think-tank consulting projects. The course aims to help students to obtain a deeper understanding of issues related to development and structural transformation in the real world economy.

-End-

**课程号 (Course Number):** 02535620

**课程名称 (Course Title):** “一带一路”和新结构经济学视角下的国际实践/International Practice from the Perspective of the New Structural Economics

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 于佳

**先修课程 (Prerequisites):** 无，对发展经济学尤其是一带一路国家发展实践感兴趣的学生都可以报名。

#### 中文简介:

本课程为学生解读“一带一路”倡议以及新结构经济学视角下的国际实践。在引入新结构经济学“增长甄别与因势利导框架”的基础上，分析非洲、亚洲工业园区发展的实践和经验，并提出“一带一路”建设需要第三方合作，包括与发达国家和国际组织的合作。“一带一路”建设中需要秉持绿色发展理念，推动基础设施绿色、低碳化，加强生物多样性保护和应对气候变化。在全球化重构形势下，“一带一路”建设面临新的挑战 and 机遇，需要在新结构经济学指导下推动“基础设施+制造业+服务业”的新模式。

课程包括以下八个单元:

- 一、全球化背景下“一带一路”倡议与新结构经济学：“华盛顿共识”的失败，新结构经济学成为发展中国家的可行选项
- 二、新结构经济学“增长甄别与因势利导框架”和工业园区建设的利益相关方分析 (GROW model)
- 三、案例分析：非洲工业园区发展的实践，包括埃塞俄比亚的成功经验以及新结构国际智库团队在贝宁、尼日利亚等国家的具体实践案例
- 四、案例分析：亚洲国家承接中国产业转移的实践，包括中巴经济走廊的得失分析
- 五、案例分析：“一带一路”对接金砖机制、亚投行，“一带一路”发展中国家不仅需要优惠资金，更需要新的发展理念和最佳实践
- 六、“一带一路”建设中的第三方合作，包括与发达国家和国际组织的合作
- 七、“一带一路”建设与绿色发展，包括应对气候变化、光伏产能转移的潜力评估
- 八、全球化重构形势下“一带一路”建设的挑战和机遇：全球产业链的区域化、多元化正在加速，部分“一带一路”发展中国家特别是非洲面临边缘化，需要推动“基础设施+制造业+服务

业”新模式

**英文简介 (Course Description):**

This course will help students to understand the “belt and road initiatives” (BRI) and the international practice from the perspective of new structural economics, as well as the application of Growth Identification and Facilitation Framework (GIFF tool). The course assess the experience and lessons learnt from the industrial park development in selected African and Asian countries. The BRI needs third party cooperation, including cooperation with developed countries and international organizations. BRI also needs to uphold the concept of green development, promote green and low carbon infrastructure, strengthen biodiversity conservation and address climate change. Given the new trend of regionalization in the global supply chain, BRI is facing new challenges and opportunities, it is proposed to promote the new mode of “infrastructure + manufacturing + service” under the guidance of new structural economics. The course includes the following eight units:

- 1) BRI in the era of globalization: failure of “Washington consensus” while new structure economics becomes a viable option for developing countries.
- 2) New structural economics “Growth Identification and Facilitation Framework, GIFF) and stakeholder analysis of industrial park development (GROW model).
- 3) Case analysis: industrial park development in Africa, including the successful experience of Ethiopia; the INSE think tank team’s practice in Benin, Nigeria, and other African countries.
- 4) Case analysis: Asian countries undertaking China’s industrial transfer, including assessment of China Pakistan Economic Corridor.
- 5) Case study: BRI vs. BRICS mechanism (including New Development Bank) and AIIB. The developing countries in BRI need concessional resources but more on new development concept and best practices.
- 6) BRI and third party cooperation, including cooperation with developed countries and international organizations.
- 7) BRI and green development, including the assessment of the potential of responding to climate change and relocation of solar photovoltaic capacity from China to other developing countries.
- 8) The challenges and opportunities of BRI under the new trend of globalization: The regionalization of supply chain has been accelerating and some developing countries, African countries in particular, are facing marginalization. Therefore,

in the implementation of BRI, a new model of "infrastructure + manufacturing + service" should be adopted.

-End-

**课程号 (Course Number):** 03033940

**课程名称 (Course Title):** 数据可视化/Data Visualization

**开课院系 (School/Department):** 信息管理系/Department of Information Management

**学分 (Credits):** 2

**授课教师 (Faculty):** 步一

**先修课程 (Prerequisites):** 上过与Python相关的课程，或者会使用Python程序设计语言

#### **中文简介:**

数据可视化旨在借助于图形化手段，清晰有效地传达与沟通信息。本课程讲授不同数据可视化方法的原理，特别强调要根据不同数据类型来选择不同的可视化方法。本课程理论与实践并重，具体包括三个模块：（1）数据可视化理论和实践基础；（2）不同类型数据的可视化；（3）可视化的交互与评测。在实践上，本课程主要使用Python语言和d3.js完成可视化任务，同时会介绍多种可视化工具（软件）。本课程是信息管理系“大数据管理与应用”专业和政府管理学院“数字治理”方向的必修课，也是信息管理系其他两个本科专业的限选课，同时也欢迎其他相关专业同学选修。

#### **英文简介 (Course Description):**

From dashboards in a car to cutting-edge scientific papers, we extensively use a visual representation of data. As our world becomes increasingly connected and digitized and as more decisions are driven by data, data visualization is becoming a critical skill for every knowledge worker. In this course, we will learn the fundamentals of data visualization and create visualizations that can provide insights into complex datasets. There are three modules in this course, namely (1) theoretical and methodological foundations of data visualizations, (2) data visualization for different data types, and (3) interactions and evaluations of data visualizations. Practically, this course uses Python and d3.js but also introduces many existing tools (software) for visualization. This is a required course for the "Big Data Management and Application" major at the Department of Information Management and for the "Digital Governance" at the School of Government, and is an elective course for other majors at the Department of Information Management. We also welcome students from other schools/departments to enroll in this course.

-End-

**课程号 (Course Number):** 03132520

**课程名称 (Course Title):** 田野调查实践/Social Study Practicum  
**开课院系 (School/Department):** 社会学系/Department of Sociology  
**学分 (Credits):** 3  
**授课教师 (Faculty):** 卢晖临, 刘爱玉

**先修课程 (Prerequisites):** 本课程的先修课要求是《社会学概论》、《社会调查与研究方法》，两门课均为社会学系的专业课程。

#### **中文简介:**

在社会科学对研究方法的训练中，研究的手艺和研究者的材料和问题意识最接近。本课程将从研究的过程入手，探索在社会学的本科培养项目中如何实现从研究兴趣到研究问题的转变，如果将研究问题付诸研究实践并撰写研究报告。本课程分为两部分，第一部分为授课教师引领学生读书和讨论，对社会科学研究技艺的几个核心环节进行集中的理论训练，会集中学习一些田野调查经典的研究范例。第二部分为分单元练习的部分，学生将以自己感兴趣的问题为基础，逐一完成各个单元的训练和写作。每一个训练环节中，学生将对本阶段的联系成果进行发言和相互评议，教师将对每一个研究课题进行点评。本课程的目标是选课同学能感受到什么是社会科学的基本研究素质，特别是培养自己动手动脑找材料和充分利用图书馆的文献资源，将自己的兴趣发展成为可以探索的研究问题的能力。学生会被要求以小组的形式展开实践调查，并不断讨论调查的材料和结果，以回应提出的研究问题。本课程也提供田野调查报告或小型论文的写作训练。

本课程是小班课程，有两名老师共同负责一个班的讨论、田野和写作训练，每个班限定在8名同学以内。

#### **英文简介 (Course Description):**

Social study is one of the core educational means to grow empirical senses in undergraduate students. We aim it to foster both analytical and theoretical thinking by introducing the social study methods to the students. Social study methodologically could be learned at three levels, theory (including history and philosophy of social science), methods and research crafts. This course focuses at the last level, the research craft. We will walk the students through the whole research process and explores the possibility of teaching social study methods in a sociological way.

-End-

**课程号 (Course Number):** 03132520  
**课程名称 (Course Title):** 田野调查实践/Social Study Practicum  
**开课院系 (School/Department):** 社会学系/Department of Sociology  
**学分 (Credits):** 3  
**授课教师 (Faculty):** 刘能, 熊跃根

**先修课程 (Prerequisites):** 本课程的先修课要求是《社会学概论》、《社会调查与研究方法》，两门课均为社会学系的专业课程。

**中文简介:**

在社会科学对研究方法的训练中，研究的手艺和研究者的材料和问题意识最接近。本课程将从研究的过程入手，探索在社会学的本科培养项目中如何实现从研究兴趣到研究问题的转变，如果将研究问题付诸研究实践并撰写研究报告。本课程分为两部分，第一部分为授课教师引领学生读书和讨论，对社会科学研究技艺的几个核心环节进行集中的理论训练，会集中学习一些田野调查经典的研究范例。第二部分为分单元练习的部分，学生将以自己感兴趣的问题为基础，逐一完成各个单元的训练和写作。每一个训练环节中，学生将对本阶段的联系成果进行发言和相互评议，教师将对每一个研究课题进行点评。本课程的目标是选课同学能感受到什么是社会科学的基本研究素质，特别是培养自己动手动脑找材料和充分利用图书馆的文献资源，将自己的兴趣发展成为可以探索的研究问题的能力。学生会被要求以小组的形式展开实践调查，并不断讨论调查的材料和结果，以回应提出的研究问题。本课程也提供田野调查报告或小型论文的写作训练。

本课程是小班课程，有两名老师共同负责一个班的讨论、田野和写作训练，每个班限定在8名同学以内。

**英文简介 (Course Description):**

Social study is one of the core educational means to grow empirical senses in undergraduate students. We aim it to foster both analytical and theoretical thinking by introducing the social study methods to the students. Social study methodologically could be learned at three levels, theory (including history and philosophy of social science), methods and research crafts. This course focuses at the last level, the research craft. We will walk the students through the whole research process and explores the possibility of teaching social study methods in a sociological way.

-End-

**课程号 (Course Number):** 03132550

**课程名称 (Course Title):** 社会调查实践/Practise

**开课院系 (School/Department):** 社会学系/Department of Sociology

**学分 (Credits):** 4

**授课教师 (Faculty):** 范新光

**先修课程 (Prerequisites):** 无

**中文简介:**

专业实习安排在大三进行，其目的是在专业学习和调查的基础上，让学生对本专业有更具体深刻的认识。通过跟随导师在相关单位或项目的实地调研，更深入地了解社会学应用，将所学的

专业知识初步应用到实际中去。

**英文简介 (Course Description):**

The course is aimed to improve the ability of field research for the third-year students in sociology. To get the credit of this course, the students are required to go in field to do research under the supervision of the instructing teachers, and finish the research report.

-End-

**课程号 (Course Number):** 03139110

**课程名称 (Course Title):** 死亡的社会学思考/Sociological Perspectives of Dying and Death

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 陆杰华

**先修课程 (Prerequisites):** 无

**中文简介:**

《死亡的社会学思考》课程是为全校跨专业的本科生专门设置的通选课程之一。目前，国内高校开设与死亡社会学相关的课程并不多见，死亡社会学的相关教材也相对较少。为此，本课程重点从社会学视角审视在中国社会经济转型背景下，尤其人口老龄化加速的宏观背景下与临终、死亡与丧亲关怀相关的重点议题。课程涉及的主要内容包括死亡社会学产生的现实背景、学科研究对象、相关理论基础、学科研究方法等方面，重点从跨学科（尤其是社会学）和跨文化对死亡教育、死亡过程、死亡类型、临终关怀、死亡应对等议题进行学理性的诠释。

**英文简介 (Course Description):**

The sociological perspective of dying and death is one of the courses that are specially set for the undergraduate at the university. At present, there are few studies about the course of the sociology of dying and death in domestic universities, and there are relatively few related teaching materials about the sociology of dying and death. To this end, this course focuses on the social and economic background of China's social and economic transformation from the perspective of sociology, especially in the macro background of population aging and the key issues related to death, death and loss of pro. The contents of the course include realistic background, research object, study of death society related theories, research methods and other aspects, the focus from the interdisciplinary (especially Sociology) and cross culture on death education, death process, causes of death and hospice care type to deal with issues such as rational interpretation.

-End-

**课程号 (Course Number):** 03631990

**课程名称 (Course Title):** 速成法语 (零起点) /French for Reading from scratch

**开课院系 (School/Department):** 外国语学院/College of Foreign Languages

**学分 (Credits):** 2

**授课教师 (Faculty):** 孙凯

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程旨在用32学时使零起点学生了解法语的发音规则，熟练掌握重要语法知识，全面领会基础语法，能够应用常见词汇和实用句型，在借助字典的情况下具备中、高级法语阅读能力以及初级听、说、写、译的能力，并能够从事一般性国际文化交流及科研工作。

**英文简介 (Course Description):**

This course is designed to enable students from the starting point to learn French pronunciation rules, acquire important grammar knowledge, fully understand the basic grammar, apply common vocabulary and practical sentences within 32 hours. Through training, students can acquire intermediate and advanced French reading ability with the help of dictionaries, and have the ability of primary listening, speaking, writing and translating, as well as being able to engage in general international cultural exchange and scientific research.

-End-

**课程号 (Course Number):** 03633331

**课程名称 (Course Title):** 西班牙语及西班牙文化/Introduction to the Spanish Language and Culture

**开课院系 (School/Department):** 外国语学院/College of Foreign Languages

**学分 (Credits):** 2

**授课教师 (Faculty):** 宋扬

**先修课程 (Prerequisites):** 无。学生无需具有西班牙语基础。

**中文简介:**

“西班牙语及西班牙文化 (初级)”是2013年开设的“西班牙文化纵览”的升级版。较旧版课程，“西班牙语及西班牙文化 (初级)”加入了西班牙语语言的学习，帮助零起点学员掌握西班牙语基本知识及常用表达方式。课程秉持“语言为骨、文化为魂”的理念，在语言方面，旨在指导学生准确掌握西班牙语的发音方法与拼读规则，大体了解西班牙语的语法体系，能够使用餐饮、购物、旅游、交友等领域常用语句。在文化方面，课程以美食、节日、人文遗产等具体文化形式为主线，带领学员走进西班牙，引导他们细致、深刻地了解西班牙人的思维方式、民族特性，为今后有可能赴西班牙留学、工作，抑或短期旅游、访问，甚至与西班牙人有工作往来的学员

打开一扇新的大门。

**英文简介 (Course Description):**

This course of Peking University is aimed at students of Chinese nationalities who want to learn Spanish language and culture. The Spanish culture –its art and architecture, its different regional traditions, its traditional dances and fiestas, its history and so on– is so rich that it is impossible, here, to describe all the aspects of Spanish culture our courses cover. We look at Picasso and Dalí, regional dances and music (like flamenco), the Easter processions and San Fermin, the Spanish gastronomy, the universities... By learning this course, the students will be able to avoid conflict and unpleasantness during Contacts with Spanish people.

-End-

**课程号 (Course Number):** 03636900

**课程名称 (Course Title):** 意大利语言和文化/Italian Language and Culture

**开课院系 (School/Department):** 外国语学院/College of Foreign Languages

**学分 (Credits):** 2

**授课教师 (Faculty):** GUIMMARRA GIUSEPPINA(校外) , 成沫, 常无名

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程介绍意大利的语言和文化。在课程的前六天，每天的课程分为三个主要部分:文化、城市和语言。前两个部分是联系在一起的，因为将介绍每个城市的文化、历史和艺术遗产等方面。另外还将按历史线索介绍文学、音乐、重要历史人物等意大利文化的其他方面。语言课则以日常用语为主，使学生掌握以语法解释为基础的基本表达。最后，将由都灵大学的教授将带来关于当代意大利社会和中意关系的讲座。

**英文简介 (Course Description):**

The course provides an introduction to Italian language and culture. The first six days are each divided into three sections: culture, cities, and language. The first two sections go hand in hand because the cities are presented in terms of its culture, history and artistic heritage. Students will study aspects of Italian society , art, literature, and music from a historical perspective, as well as prominent historical figures. The language teaching will focus on basic expressions, grammar and everyday mores. During the last two days, Professors from the University of Turin will give lectures on contemporary Italian society and Sino-Italian relationship.

-End-

**课程号 (Course Number):** 03835620

**课程名称 (Course Title):** 美国华人移民的历史与文化/History and Culture of Chinese Immigrants in America

**开课院系 (School/Department):** 英语语言文学系/English Language and Literature

**学分 (Credits):** 2

**授课教师 (Faculty):** Tian Xiaofeng(校外)

**先修课程 (Prerequisites):** n/a

**中文简介:**

通过阅读当代文学及其他作品和欣赏电影，探索美国华人移民的历史与文化问题。主要探讨的论题包括华人移民美国的历史、华人移民的文化和传统、以及中国文化在美国与其他文化的融合问题。

学生将发现在美国华人移民的历史和文化探讨中的一些主要问题，同时对当前教育和文化领域现存的一些问题有一定的了解。

本课程旨在通过阅读当代作品提高英语程度。通过阅读和讨论，学生提高语言能力，而且能够在美国华人的历史和文化问题上拓宽视野。

**英文简介 (Course Description):**

Exploration of the history and culture of Chinese immigrants in the U.S. through reading of literary and other cultural texts and appreciation of movies. Topics include the history of Chinese immigration in America, the culture and tradition of Chinese immigrants and the interaction of Chinese culture with other cultures in America.

Students identify some main issues involved in the discussion of the history and culture of Chinese in America and gain an understanding of the current issues in education and cultural realms.

Designed to enhance English proficiency through reading of contemporary works. Through reading and discussion, students develop language skills, in addition to gain new perspectives of history and culture of Chinese America.

-End-

**课程号 (Course Number):** 03835620

**课程名称 (Course Title):** 美国华人移民的历史与文化/History and Culture of Chinese Immigrants in America

**开课院系 (School/Department):** 英语语言文学系/English Language and Literature

**学分 (Credits):** 2

**授课教师 (Faculty):** Tian Xiaofeng(校外)

**先修课程 (Prerequisites):** n/a

**中文简介:**

通过阅读当代文学及其他作品和欣赏电影，探索美国华人移民的历史与文化问题。主要探讨的论题包括华人移民美国的历史、华人移民的文化和传统、以及中国文化在美国与其他文化的融合问题。

学生将发现在美国华人移民的历史和文化探讨中的一些主要问题，同时对当前教育和文化领域现存的一些问题有一定的了解。

本课程旨在通过阅读当代作品提高英语程度。通过阅读和讨论，学生提高语言能力，而且能够在美国华人的历史和文化问题上拓宽视野。

**英文简介 (Course Description):**

Exploration of the history and culture of Chinese immigrants in the U.S. through reading of literary and other cultural texts and appreciation of movies. Topics include the history of Chinese immigration in America, the culture and tradition of Chinese immigrants and the interaction of Chinese culture with other cultures in America.

Students identify some main issues involved in the discussion of the history and culture of Chinese in America and gain an understanding of the current issues in education and cultural realms.

Designed to enhance English proficiency through reading of contemporary works. Through reading and discussion, students develop language skills, in addition to gain new perspectives of history and culture of Chinese America.

-End-

**课程号 (Course Number):** 03835983

**课程名称 (Course Title):** 世界英语与英语世界/World Englishes and the English World

**开课院系 (School/Department):** 英语语言文学系/English Language and Literature

**学分 (Credits):** 2

**授课教师 (Faculty):** 徐志长(校外)

**先修课程 (Prerequisites):** 大学英语C级课程

**中文简介:**

本课程主要介绍“世界英语”(World Englishes)这门学科的发展现状，以及理论与实践。课程内容包括英国英语、美国英语、澳大利亚英语、以及其它国家和地区(包括东南亚各国和中国)的英语发展和使用。本课程的目的是使学生能够了解世界英语的基本理论和在英语世界(the English world)的本土化发展和使用。本课程的教学要求是，学生具有本科以上的英语基础，并了解一些各国英语变体(例如英国英语，美国英语和中国英语)之间的差异和相似之处。

**英文简介 (Course Description):**

This course introduces the developments of the discipline of World Englishes, and relevant theories and practices. It covers British English, American English, Australian English, and other Englishes, including major Southeast Asian Englishes and Chinese English, in terms of their use and development. The major objective of this course is to enable students to understand fundamental theories of World Englishes and how they are nativised and used in local contexts. The requirement

for taking the course is that students should have an English proficiency at or above the tertiary level, and a basic understanding of the variations and similarities among major English varieties (e.g., British English, American English and Chinese English).

-End-

**课程号 (Course Number):** 03835988

**课程名称 (Course Title):** 文化人类学概论/Introduction to Cultural Anthropology

**开课院系 (School/Department):** 英语语言文学系/English Language and Literature

**学分 (Credits):** 2

**授课教师 (Faculty):** 雷静(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

该课程以英文为媒介浅显易懂地介绍文化人类学的主要理论和方法, 并通过系统的分析、解释和比较不同族群的语言交流、经济活动、亲属系统、性别关系等文化现象和风俗习惯, 揭示全人类文化的共性和特性。

**英文简介 (Course Description):**

This course is an introduction to cultural anthropology, the subfield of anthropology that examines various contemporary societies and cultures throughout the world. It aims to help students gain a general understanding of the theories, methods, and analysis used in the field of Cultural Anthropology. By systematically analyzing many socio-cultural factors, such as language, subsistence, family, kinship, gender, political system, religion, and etc., it will illuminate basic similarities and differences among all peoples and cultures.

-End-

**课程号 (Course Number):** 04031313

**课程名称 (Course Title):** 学年论文(马院) /Term Thesis

**开课院系 (School/Department):** 马克思主义学院/Marxism Institute

**学分 (Credits):** 1

**授课教师 (Faculty):** 宋朝龙

**先修课程 (Prerequisites):** 无

**中文简介:**

面向大钊班和马克思主义理论专业学生开设, 要求大钊班学生大四开学前(暑期)选课, 学生在导师指导下确立研究主题, 开展研究, 大四开学前提交论文, 通过答辩。

**英文简介 (Course Description):**

Senior students are required to take this course and finish term thesis before senior year begins. Students are encouraged to write in the guidance of professor specialized in relative field of work.

-End-

**课程号 (Course Number):** 04130030

**课程名称 (Course Title):** 太极拳/Shadowboxing

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 玄雨晴(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

## 一、课程介绍

太极拳是一种柔和、缓慢、轻灵的拳术，它以棚、捋、挤、按、采、列、肘、靠、进、退、顾、盼、定等为基本势法（俗称八法五步）。动作轻柔圆活，虚实分明，处处带有弧形，运动绵绵不断，势势相承。

本课程主要学习“二十四式太极拳”也叫“简化太极拳”，其内容精练，动作规范，数量合理，易学易练，能充分体现太极拳的运动特点。通过练习，对外能利关节，强筋骨，壮体魄；对内能理脏腑，通筋脉，调精神。对调节内环境的平衡，调养气血，缓解身心疲劳，改善人体机能，增强体质十分有益。

## 课程要求:

1. 原则上不允许同学蹭课。
2. 上下课时师生要相互行抱拳礼。
3. 上课前不得饮酒，暴饮暴食或空腹。上课期间，不允许抽烟，嚼口香糖或吃零食。
4. 学生如有身体不适或既往病史者，应在课前向老师报告，根据具体情况酌情考虑安排活动内容和运动量。
5. 上课必须着运动装和运动鞋，并把随身携带的书包、衣物等按老师要求摆放整齐。
6. 爱护器材。上课时，身上不携带任何可能伤害自己或他人的硬物。如：笔，手机，小刀，钥匙及钥匙链等。
7. 上课不得打手机或发短信，听随身听。
8. 练习过程中，要根据自身身体素质情况，量力而行，不要因为一时兴奋而动作过分用力或动作幅度过大，出现身体意外而受伤。
9. 需要同学配合练习时，要认真听取讲解，严格按老师要求去做，不允许嬉笑，打闹，冒险等极端个人行为，要营造团结，友爱，仔细，默契配合，相互帮助的练习氛围，以确保练习的安全和有效。
10. 不将贵重物品带到课堂，避免丢失。
11. 认真练习，再学会一定运动技能的同时，全面发展，提高自己的身体素质，达到增强体质的

目的。

## 二、课程任务

1. 培养学生锻炼身体的习惯和顽强的意志品质以及“健康第一”的思想意识。
2. 增进健康，增强体质，全面提高学生的身体及心理素质。
3. 掌握二十四式太极拳基本理论，基本技术及全套动作。

### 英文简介 (Course Description):

#### 1. Introduction to This Course

Taijiquan (Tai Chi Quan) is a mild, slow, agile Chinese internal martial art, which includes eight positions of body and five positions of the feet, namely Beng, Lyu, Ji, An, Cai, Lie, Zhou, Kao, Jin, Tui, Gu, Pan, Ding in Chinese. The movement of Taijiquan is flexible and keeps the balance between strength and gentleness.

‘Oval’ -like, or ‘circle’ -like, movement, which symbolically reflects the endlessness of momentum and the essence of Harmony in Chinese philosophy, can be found in your everyday practice of Taijiquan.

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-End-

**课程号 (Course Number):** 04130030

**课程名称 (Course Title):** 太极拳/Shadowboxing

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 玄雨晴(校外)

**先修课程 (Prerequisites):** 无

### 中文简介:

#### 一、课程介绍

太极拳是一种柔和、缓慢、轻灵的拳术，它以棚、捋、挤、按、采、列、肘、靠、进、退、顾、盼、定等为基本势法（俗称八法五步）。动作轻柔圆活，虚实分明，处处带有弧形，运动绵绵不断，势势相承。

本课程主要学习“二十四式太极拳”也叫“简化太极拳”，其内容精练，动作规范，数量合理，易学易练，能充分体现太极拳的运动特点。通过练习，对外能利关节，强筋骨，壮体魄；对内

能理脏腑，通筋脉，调精神。对调节内环境的平衡，调养气血，缓解身心疲劳，改善人体机能，增强体质十分有益。

课程要求：

1. 原则上不允许同学蹭课。
2. 上下课时师生要相互行抱拳礼。
3. 上课前不得饮酒，暴饮暴食或空腹。上课期间，不允许抽烟，嚼口香糖或吃零食。
4. 学生如有身体不适或既往病史者，应在课前向老师报告，根据具体情况酌情考虑安排活动内容和运动量。
5. 上课必须着运动装和运动鞋，并把随身携带的书包、衣物等按老师要求摆放整齐。
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8. 练习过程中，要根据自身身体素质情况，量力而行，不要因为一时兴奋而动作过分用力或动作幅度过大，出现身体意外而受伤。
9. 需要同学配合练习时，要认真听取讲解，严格按老师要求去做，不允许嬉笑，打闹，冒险等极端个人行为，要营造团结，友爱，仔细，默契配合，相互帮助的练习氛围，以确保练习的安全和有效。
10. 不将贵重物品带到课堂，避免丢失。
11. 认真练习，再学会一定运动技能的同时，全面发展，提高自己的身体素质，达到增强体质的目的。

## 二、课程任务

1. 培养学生锻炼身体的习惯和顽强的意志品质以及“健康第一”的思想意识。
2. 增进健康，增强体质，全面提高学生的身体及心理素质。
3. 掌握二十四式太极拳基本理论，基本技术及全套动作。

## 英文简介 (Course Description):

### 1. Introduction to This Course

Taijiquan (Tai Chi Quan) is a mild, slow, agile Chinese internal martial art, which includes eight positions of body and five positions of the feet, namely Beng, Lyu, Ji, An, Cai, Lie, Zhou, Kao, Jin, Tui, Gu, Pan, Ding in Chinese. The movement of Taijiquan is flexible and keeps the balance between strength and gentleness.

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-End-

课程号 (Course Number): 04130030

课程名称 (Course Title): 太极拳/Shadowboxing

开课院系 (School/Department): 体育教研部/Section of Physical Culture

学分 (Credits): 1

授课教师 (Faculty): 吴昊

先修课程 (Prerequisites): 无

### 中文简介:

#### 一、课程介绍

太极拳是一种柔和、缓慢、轻灵的拳术，它以棚、捋、挤、按、采、列、肘、靠、进、退、顾、盼、定等为基本势法（俗称八法五步）。动作轻柔圆活，虚实分明，处处带有弧形，运动绵绵不断，势势相承。

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-End-

**课程号 (Course Number):** 04130030

**课程名称 (Course Title):** 太极拳/Shadowboxing

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 吴昊

**先修课程 (Prerequisites):** 无

### 中文简介:

#### 一、课程介绍

太极拳是一种柔和、缓慢、轻灵的拳术，它以棚、捋、挤、按、采、列、肘、靠、进、退、顾、盼、定等为基本势法（俗称八法五步）。动作轻柔圆活，虚实分明，处处带有弧形，运动绵绵不断，势势相承。

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#### 课程要求:

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2. 上下课时师生要相互行抱拳礼。
3. 上课前不得饮酒，暴饮暴食或空腹。上课期间，不允许抽烟，嚼口香糖或吃零食。

4. 学生如有身体不适或既往病史者，应在课前向老师报告，根据具体情况酌情考虑安排活动内容和运动量。
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8. 练习过程中，要根据自身身体素质情况，量力而行，不要因为一时兴奋而动作过分用力或动作幅度过大，出现身体意外而受伤。
9. 需要同学配合练习时，要认真听取讲解，严格按老师要求去做，不允许嬉笑，打闹，冒险等极端个人行为，要营造团结，友爱，仔细，默契配合，相互帮助的练习氛围，以确保练习的安全和有效。
10. 不将贵重物品带到课堂，避免丢失。
11. 认真练习，再学会一定运动技能的同时，全面发展，提高自己的身体素质，达到增强体质为目的。

## 二、课程任务

1. 培养学生锻炼身体的习惯和顽强的意志品质以及“健康第一”的思想意识。
2. 增进健康，增强体质，全面提高学生的身体及心理素质。
3. 掌握二十四式太极拳基本理论，基本技术及全套动作。

## 英文简介 (Course Description):

### 1. Introduction to This Course

Taijiquan (Tai Chi Quan) is a mild, slow, agile Chinese internal martial art, which includes eight positions of body and five positions of the feet, namely Beng, Lyu, Ji, An, Cai, Lie, Zhou, Kao, Jin, Tui, Gu, Pan, Ding in Chinese. The movement of Taijiquan is flexible and keeps the balance between strength and gentleness.

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-End-

课程号 (Course Number): 04130040

课程名称 (Course Title): 健美操/Aerobics

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 车磊

**先修课程 (Prerequisites):** 无

**中文简介:**

一、 课程介绍

1. 健美操是一项融体操、舞蹈、音乐为一体，以有氧练习为基础，以健、力、美为主要特征，具有高度艺术性的体育项目。

本课程主要教授健美操基本动作（包括基本姿态动作，基本难度动作和基本步伐组合），全国健美操大众锻炼标准三级套路。通过练习，培养正确体态，塑造美的体态，提高身体协调性、灵活性，并能创编适合自己锻炼的套路动作，达到增进健康，激发活力，愉悦身心的目的。

2. 安全注意事项:

(1) 穿着合适的有利于运动的运动服、运动鞋

(2) 上课时要注意自身和同学的安全，如有胸闷、心慌、头晕等身体处于疲劳状态、请向老师提出，由老师根据情况安排。

二、 课程任务

1. 掌握健美操的基本技术和相关理论，培养学生终身体育的观念。

2. 掌握一项终身体育锻炼技能，并在实践中发展学生的全面素质。

**英文简介 (Course Description):**

Course Introduction:

Based on aerobic exercise, Aerobic Gymnastics is an artistic sport which combines Gymnastic, dance and Music, and has features of power and beauty.

?? In the course, students could learn basic movements of Aerobic Gymnastics, including basic posture, basic elements and step combinations, and Chinese People Exercise Third Standard Routine of Aerobic Gymnastics. In the course, students can get right posture, make beautiful attitude, and improve body's flexibility. Through practice, the ability of choreography will be enhanced to make a suitable routine for students themselves to achieve the goal of improving health and promoting vitality.

-End-

**课程号 (Course Number):** 04130040

**课程名称 (Course Title):** 健美操/Aerobics

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 车磊

**先修课程 (Prerequisites):** 无

**中文简介:**

## 一、 课程介绍

1. 健美操是一项融体操、舞蹈、音乐为一体，以有氧练习为基础，以健、力、美为主要特征，具有高度艺术性的体育项目。

本课程主要教授健美操基本动作（包括基本姿态动作，基本难度动作和基本步伐组合），全国健美操大众锻炼标准三级套路。通过练习，培养正确体态，塑造美的体态，提高身体协调性、灵活性，并能创编适合自己锻炼的套路动作，达到增进健康，激发活力，愉悦身心的目的。

2. 安全注意事项：

(1) 穿着合适的有利于运动的运动服、运动鞋

(2) 上课时要注意自身和同学的安全，如有胸闷、心慌、头晕等身体处于疲劳状态、请向老师提出，由老师根据情况安排。

## 二、 课程任务

1. 掌握健美操的基本技术和相关理论，培养学生终身体育的观念。

2. 掌握一项终身体育锻炼技能，并在实践中发展学生的全面素质。

### 英文简介 (Course Description):

Course Introduction:

Based on aerobic exercise, Aerobic Gymnastics is an artistic sport which combines Gymnastic, dance and Music, and has features of power and beauty.

?? In the course, students could learn basic movements of Aerobic Gymnastics, including basic posture, basic elements and step combinations, and Chinese People Exercise Third Standard Routine of Aerobic Gymnastics. In the course, students can get right posture, make beautiful attitude, and improve body's flexibility. Through practice, the ability of choreography will be enhanced to make a suitable routine for students themselves to achieve the goal of improving health and promoting vitality.

-End-

**课程号 (Course Number):** 04130126

**课程名称 (Course Title):** 体美/Physical and Aesthetic course

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 秦朗

**先修课程 (Prerequisites):** 无

### 中文简介:

“体美融合”是当下高校教学改革中的创新一环，笔者所开设的体美课程主要以肢体语言为表现手段，经过科学有效的基本功训练以及具有美学渲染的表现力训练，结合中国民族民间舞种、中国古典身韵、即兴与命题编创等知识点和训练内容，力争达到增强学生身心素质、提升学生审美意识、开拓学生创新思维等体美融合的新教育理念，同时在核心教学理念上将更加注重让学生在课堂上、理论上、锻炼中、实践中“享受乐趣、增强体质、健全人格、锤炼意志。”

体美课是以人体为表现媒介，用运动中的人体抒发人们内在精神的外在形式，是一种和谐的体育艺术，既锻炼身体，又净化心灵，是表现人们浓缩而升华了的情感为追求目标的社会活动。它是人体造型上“动的艺术”，是藉着人体“动的形象”表现出各种“形态化”了的运动，它的本质具有“生命性”，人体本身作为一个具有生命性的复杂物体，一方面体现于人体本身，另一方面则体现于生物机体自然且规律的运动——呼吸。体美课正是注重运动中每一环节、每一动作、每一形态的“呼吸”，加之配合节奏、音乐、韵律等外部媒介融为一体的学习过程，让学生充分尝试、体会以及感悟到体育美育这一融合创新的课程形式，初步达到具有“形神兼备、身心并用、内外统一”的体美修养与素质。

#### **英文简介 (Course Description):**

The “Fusion of Physical Education and Aesthetic Education” is an innovative part of current educational reform in universities. Body language is the main expression adopted in the physical and aesthetic course as established by the author. Through the basic skill training in a scientific and effective manner and through the expression training with esthetics, learning points and training contents such as classic ballet, Chinese classical body rhyme, impromptu and creation and proposition are combined in the course. The author strives to achieve the main objectives in the new education philosophy of “Fusion of Physical Education and Aesthetic Education”, including the enhancement of physical and mental quality of students, the promotion of aesthetic consciousness of students, the extension of innovative thinking of students; in the mean time, it is important to make the students “have fun, enhance physical quality, perfect the personality and exercise the willpower” in the class, in theoretical study, in training as well as in practice, all of which are emphasized in the core education philosophy. Human body is the expression medium of the physical and aesthetic course, and in the course, the human body in motion will be the external form to express the internal spirit of people, which is a harmonious athletics art. Such art is able to exercise the body as well as purify the heart, such art is a type of social activity to express the concentrated and distilled sentiment. It is the “art of motion” in term of human body modeling. It will display different types of motion in different “forms”, by means of “dynamic image” of human body. Its essence is of “life”. Human body, as a living and sophisticated object, is embodied in human body itself on one hand, and is embodied in the natural and regular movement (i.e. breathing) of living organisms on the other hand. The learning process of physical and aesthetic course emphasizes the “breathing” in the state of motion, in every link, in every movement and in every form, together with the external medium such as tempo, music and rhythm. The students can fully attempt, experience and comprehend the concept of “Physical Education and Aesthetic Education”, in the integrated and innovative form of physical and aesthetic course. Through the learning of physical and aesthetic course, the students can achieve the following accomplishments and qualities at a preliminary stage, which are “the unity of both form and spirit”, “the use of both body and mind”, and “the unity of both the internal and the external”.

-End-

**课程号 (Course Number):** 04130126

**课程名称 (Course Title):** 体美/Physical and Aesthetic course

**开课院系 (School/Department):** 体育教研部/Section of Physical Culture

**学分 (Credits):** 1

**授课教师 (Faculty):** 秦朗

**先修课程 (Prerequisites):** 无

#### **中文简介:**

“体美融合”是当下高校教学改革中的创新一环，笔者所开设的体美课程主要以肢体语言为表现手段，经过科学有效的基本功训练以及具有美学渲染的表现力训练，结合中国民族民间舞种、中国古典身韵、即兴与命题编创等知识点和训练内容，力争达到增强学生身心素质、提升学生审美意识、开拓学生创新思维等体美融合的新教育理念，同时在核心教学理念上将更加注重让学生们在课堂上、理论上、锻炼中、实践中“享受乐趣、增强体质、健全人格、锤炼意志。”体美课是以人体为表现媒介，用运动中的人体抒发人们内在精神的外在形式，是一种和谐的体育艺术，既锻炼身体，又净化心灵，是表现人们浓缩而升华了的情感为追求目标的社会活动。它是人体造型上“动的艺术”，是藉着人体“动的形象”表现出各种“形态化”了的运动，它的本质具有“生命性”，人体本身作为一个具有生命性的复杂物体，一方面体现于人体本身，另一方面则体现于生物机体自然且规律的运动——呼吸。体美课正是注重运动中每一环节、每一动作、每一形态的“呼吸”，加之配合节奏、音乐、韵律等外部媒介融为一体的学习过程，让学生充分尝试、体会以及感悟到体育美育这一融合创新的课程形式，初步达到具有“形神兼备、身心并用、内外统一”的体美修养与素质。

#### **英文简介 (Course Description):**

The “Fusion of Physical Education and Aesthetic Education” is an innovative part of current educational reform in universities. Body language is the main expression adopted in the physical and aesthetic course as established by the author. Through the basic skill training in a scientific and effective manner and through the expression training with esthetics, learning points and training contents such as classic ballet, Chinese classical body rhyme, impromptu and creation and proposition are combined in the course. The author strives to achieve the main objectives in the new education philosophy of “Fusion of Physical Education and Aesthetic Education”, including the enhancement of physical and mental quality of students, the promotion of aesthetic consciousness of students, the extension of innovative thinking of students; in the mean time, it is important to make the students “have fun, enhance physical quality, perfect the personality and exercise the willpower” in the class, in theoretical study, in training as well as in practice, all of which are emphasized in the core education philosophy. Human body is the expression medium of the physical and aesthetic course, and in the course, the human body in motion will be the external form to express the internal spirit of people, which is a harmonious athletics art. Such art is able to exercise the

body as well as purify the heart, such art is a type of social activity to express the concentrated and distilled sentiment. It is the “art of motion” in term of human body modeling. It will display different types of motion in different “forms”, by means of “dynamic image” of human body. Its essence is of “life”. Human body, as a living and sophisticated object, is embodied in human body itself on one hand, and is embodied in the natural and regular movement (i.e. breathing) of living organisms on the other hand. The learning process of physical and aesthetic course emphasizes the “breathing” in the state of motion, in every link, in every movement and in every form, together with the external medium such as tempo, music and rhythm. The students can fully attempt, experience and comprehend the concept of “Physical Education and Aesthetic Education”, in the integrated and innovative form of physical and aesthetic course. Through the learning of physical and aesthetic course, the students can achieve the following accomplishments and qualities at a preliminary stage, which are “the unity of both form and spirit”, “the use of both body and mind”, and “the unity of both the internal and the external”.

-End-

**课程号 (Course Number):** 04130721

**课程名称(Course Title):** 骑行老北京城 探索千年古都回响/cycling in ancient Beijing city: Exploring the echo of one-thousand-year old capital

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 卢福泉

**先修课程 (Prerequisites):** 面对外国和境外本科生和研究生，没有先修课程要求，但要求选课学生会骑车，掌握基本骑行技术和技巧，且身体体能能应对较长距离的骑行。

Undergraduates and graduates who prefer field trip to indulge Beijing’ s history and culture, as a stranger to the city. Cycling skills and average fitness level to ride a long distance are pre-requisites.

### 中文简介:

#### 课程简介

本课程是通过骑行，探索老北京城作为近千年的历史文化古都的课程。在北京城规划6条具有代表性的骑行路线每条线路包含宫殿、博物馆、寺庙、公园、剧院，河流和湖泊等数十处值得游览的景点，探索北京古城作为金元尤其是明清都城一共869年的悠久历史和丰富多彩的文化。这些线路包括：

探索北京城二环：故宫及明清都城外城

觉醒的红色征途：北大在新民主主义革命初期的贡献

梨园之旅：京剧文化之旅  
东城胡同行宫、府邸、历史名人故居之旅  
西城寻根之旅：金元遗迹  
北京中轴线之旅：最佳风水线路

#### 先决条件/目标受众

课程面对更喜欢实地考察的本科生和研究生，愿意沉迷于北京的历史和文化的城市访客。骑自行车的技能和中等健康水平是先决条件。

#### 课程进行

课程为期4周，每天4小时（周二和周五下午，可能会有变动），每周两次，共计32课时。校园第一节课和最后一节课，其他6节课是骑自行车实地考察和讨论。

#### 作业（论文或其他形式）

在每次单车旅程中，学生可能需要提前做研究，对骑行停靠点的历史和文化进行陈述。  
每个学生期末完成一个小论文，对历史和文化的反思和想法将印在论文集中。  
每个学生/学生小组将被指派在路线的其中一个地点做一个简短的介绍。  
每名学生需提交3-5张照片打印骑行旅程相册。

#### 评价详情

自行车实地考察完成、自行车路线停靠点历史文化的称述，成占总分的60%。40% 的分数用于课堂上的论文展示。

#### 英文简介 (Course Description):

course introduction

This course is a course to explore the old Beijing city as an ancient capital with prefunded history and culture for nearly a thousand years through cycling. listening the echo of ancient Beijing City, as the Capital of Jin, Yuan, especially Ming and Qing Dynasty of 869 years, by planning 6 representative cycling routes in which contains dozens of worth visiting places including palace, museums, temples, parks, theaters, rivers and lakes. these routes listed as below:

Exploring the Beijing city 2nd ring: Forbidden City and outer city of Ming and Qing Dynasty Capital

The Awakening Red Journey: The contribution of beida at the early of New democratic revolution

the journey of Liyuan: the Beijing opera culture tour.

Journey of palace, Mansion, and historical celebrity former residence in Dongche Hutong

The journey of in searching of origin in Xicheng: the ruins of Jin and Yuan Dynasty

The journey of Central Axis Tour of Beijing city: the Best Feng Shui line

Pre-requisites /Target audience

Undergraduates and graduates who prefer field trip to indulge Beijing' s history and culture, as a stranger to the city. Cycling skills and average fitness are pre-requisites.

#### Proceeding of the Course

The course is a four-week course, 4 hours each day (on Tuesday and Friday afternoon, might be subjected to change.) , twice a week and totally 32 teaching hours. The first and last class in campus, the other 6 are cycling field trip journeys.

#### Assignments (essay or other forms)

During every cycling journey, presentation of assigned stop point was required to be made.

Essay will be assigned upon each student and reflections and thoughts will be printed in essay collection.

Each student/students' group will be assigned to make a short presentation on one of the spots of the routes.

Each students are required to submit 3-5 photos to print the photo album of the cycling journey.

#### Evaluation Details

Cycling field trips made, cycling routes stop point presentation done account for 60% of the total score. 40% of the score goes to the essay presentation at the lass class.

-End-

**课程号 (Course Number):** 04130721

**课程名称(Course Title):** 骑行老北京城 探索千年古都回响/cycling in ancient Beijing city:  
Exploring the echo of one-thousand-year old capital

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 卢福泉

**先修课程 (Prerequisites):** 面对外国和境外本科生和研究生, 没有先修课程要求, 但要求选课学生会骑车, 掌握基本骑行技术和技巧, 且身体体能能应对较长距离的骑行。

Undergraduates and graduates who prefer field trip to indulge Beijing' s history and culture, as a stranger to the city. Cycling skills and average fitness level to ride a long distance are pre-requisites.

**中文简介:**

## 课程简介

本课程是通过骑行，探索老北京城作为近千年的历史文化古都的课程。在北京城规划6条具有代表性的骑行路线每条线路包含宫殿、博物馆、寺庙、公园、剧院，河流和湖泊等数十处值得游览的景点，探索北京古城作为金元尤其是明清都城一共869年的悠久历史和丰富多彩的文化。这些线路包括：

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觉醒的红色征途：北大在新民主主义革命初期的贡献  
梨园之旅：京剧文化之旅  
东城胡同行宫、府邸、历史名人故居之旅  
西城寻根之旅：金元遗迹  
北京中轴线之旅：最佳风水线路

### 先决条件/目标受众

课程面对更喜欢实地考察的本科生和研究生，愿意沉迷于北京的历史和文化的城市访客。骑自行车的技能和中等健康水平是先决条件。

### 课程进行

课程为期4周，每天4小时（周二和周五下午，可能会有变动），每周两次，共计32课时。校园第一节课和最后一节课，其他6节课是骑自行车实地考察和讨论。

### 作业（论文或其他形式）

在每次单车旅程中，学生可能需要提前做研究，对骑行停靠点的历史和文化进行陈述。

每个学生期末完成一个小论文，对历史和文化的反思和想法将印在论文集中。

每个学生/学生小组将被指派在路线的其中一个地点做一个简短的介绍。

每名学生需提交3-5张照片打印骑行旅程相册。

### 评价详情

自行车实地考察完成、自行车路线停靠点历史文化的称述，成绩占总分的60%。40%的分数用于课堂上的论文展示。

### 英文简介 (Course Description):

course introduction

This course is a course to explore the old Beijing city as an ancient capital with prefunded history and culture for nearly a thousand years through cycling. listening the echo of ancient Beijing City, as the Capital of Jin, Yuan, especially Ming and Qing Dynasty of 869 years, by planning 6 representative cycling routes in which contains dozens of worth visiting places including palace, museums, temples, parks, theaters, rivers and lakes. these routes listed as below:

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the journey of Liyuan: the Beijing opera culture tour.

Journey of palace, Mansion, and historical celebrity former residence in Dongche Hutong

The journey of in searching of origin in Xicheng: the ruins of Jin and Yuan Dynasty

The journey of Central Axis Tour of Beijing city: the Best Feng Shui line

Pre-requisites /Target audience

Undergraduates and graduates who prefer field trip to indulge Beijing's history and culture, as a stranger to the city. Cycling skills and average fitness are pre-requisites.

Proceeding of the Course

The course is a four-week course, 4 hours each day (on Tuesday and Friday afternoon, might be subjected to change.) , twice a week and totally 32 teaching hours. The first and last class in campus, the other 6 are cycling field trip journeys.

Assignments (essay or other forms)

During every cycling journey, presentation of assigned stop point was required to be made.

Essay will be assigned upon each student and reflections and thoughts will be printed in essay collection.

Each student/students' group will be assigned to make a short presentation on one of the spots of the routes.

Each students are required to submit 3-5 photos to print the photo album of the cycling journey.

Evaluation Details

Cycling field trips made, cycling routes stop point presentation done account for 60% of the total score. 40% of the score goes to the essay presentation at the lass class.

-End-

**课程号 (Course Number):** 04334017

**课程名称 (Course Title):** 美索不达米亚艺术与文明/Mesopotamian Art and Civilization

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 贾妍

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程在世界文明发展史的大背景基础上，通过对古代美索不达米亚（两河流域）艺术与建筑的起源、发展、风格特点及历史流变的讲解和考察，引导学生理解作为“人类文明摇篮”的古代美索不达米亚特有的视觉与物质文化。课程力图突破西方传统“东方学”框架下的文明视野，以中华文明为观想本体和潜在的比较对象，在美索不达米亚文明的盛衰中引导学生思考人类文明面临的普遍问题，在全球化的语境下提升文明对话的意识与能力。方法论层面，课程致力于在讲授中引入艺术史学科的一些基本研究路径，即从视觉材料入手，结合文献记载和考古材料，通过对“图”与“物”的观看、解读和阐释，探索其背后独特的文明形态与文化传统。

**英文简介 (Course Description):**

This is an introductory course of the art and civilization of ancient Mesopotamia. Through the survey of the origins, developments, continuity and changes of styles of the three thousand years of art history, this course intends to introduce to the students a visual and material culture unique to ancient Mesopotamia, “the cradle of human civilization.” With a cross-cultural comparative perspective, however, observing with a vision of Chinese civilization for potential cultural comparison, this course seeks to break through the framework of Eurocentric “orientalism” in the Near Eastern studies, and to promote a dialogue of the two ancient cultures of Mesopotamia and China in the context of globalization. This course also encourages students to think about some universal problems faced by human civilizations, in the birth and death, rise and fall of the long dead Mesopotamian culture. At the methodological level, the course will include a survey of archaeological data as well as some basic art-historical approaches available for analysis of ancient monuments.

-End-

**课程号 (Course Number):** 04830810

**课程名称 (Course Title):** 可编程逻辑电路设计(I)/Digital Design Using PLD (I)

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 蒋伟

**先修课程 (Prerequisites):** 数字逻辑电路

**中文简介:**

通过课程的学习，使学生熟悉可编程逻辑器件的结构和原理，掌握可编程逻辑器件的开发方法和工具，学习硬件描述语言，锻炼设计和实现数字系统的综合能力，培养学生的团队合作、交流和表达能力。

**英文简介 (Course Description):**

By studying and practicing in this course, we wish our students can make progress in the following aspects: getting familiar with the basic structure of the programmable devices, grasping the developing tools and process of a digital design using programmable logic devices (PLD), studying the hardware description language(HDL), enhancing the ability of designing and realizing a digital design, developing the ability of cooperation, communication and lecturing.

-End-

**课程号 (Course Number):** 04833310

**课程名称 (Course Title):** 集成电路逻辑综合实验/logic synthesis labs

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 贾嵩

**先修课程 (Prerequisites):** 数字逻辑电路

**中文简介:**

逻辑综合是数字集成电路设计优化的重要手段，逻辑综合通过RTL源代码转换成门级网表的过程实现数字设计向工艺库的映射。

在综合过程中，优化进程完成库单元的配置组合，使电路能最好地满足设计的功能、时序和面积的要求。逻辑综合为约束驱动 (constraint driven)，给定的约束条件是综合的目标。约束一般是在对整个系统进行时序分析得到的，综合工具会对电路进行优化以满足约束的要求。

本课程安排10个实验，通过实验内容，学习掌握逻辑综合的基本知识和实际操作。通过课程学习，学生可以掌握逻辑综合的基本方法、工具使用、优化技巧等知识。

本课程的先修课为数字逻辑电路。

本课程为实验课，上课时间安排在两周，一共10次课，每次上机4小时。

**英文简介 (Course Description):**

Logic synthesis is an important method to design a digital integrated circuits. The process will translate the RTL code to gate level netlist and map the design to technology library.

Logic synthesis is the transformation of an idea into a manufacturable device to carry out an intend function. This involves three main steps:

\*Design is broken down into sets of timing paths

\*The delay of each path is calculated

\*All path delays are checked to see if timing constraints have been met.

There are ten labs in the class. Students will learn the process and skill of logic synthesis.

The students are expected to have studied "logic circuits" before.

-End-

**课程号 (Course Number):** 04833720

**课程名称 (Course Title):** 基于IP的SOC设计实验/SOC design labs

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 贾嵩

**先修课程 (Prerequisites):** 数字逻辑电路, 数字集成电路设计

#### **中文简介:**

集成电路的设计从单一功能的专用功能ASIC转变为一个复杂系统, 系统级芯片设计 (SoC) 是基于IP的设计方法, Intellectual Property也称作Virtual Component, Macro等, 是SoC中可以复用的电路模块。本课程通过相关实验内容, 学习掌握基于IP的 SoC设计的基本知识和实际操作。

数字集成电路设计包括自顶向下的设计方法和自底向上的设计方法, 本课程中将首先学习自底向上的设计方法, 利用定制方法完成一个IP硬核; 然后学习自顶向下的设计方法, 利用半定制流程完成系统设计; 最后通过IP的集成完成整个设计和版图验证。

通过课程学习, 学生可以掌握集成电路的定制和半定制设计方法、IP建模、SoC设计方法等知识。

#### **英文简介 (Course Description):**

Digital IC design will design a complicated system instead of just an application specific circuit. System on Chip(SOC) design is a process based on Intellectual Property(IPs). IP is also referred as Virtual Component or Macro. They are the circuit blocks reused in system on chips.

In the class, students will learn the basic methods and knowledge by different labs. Methodologies of IC design will be understood in the class. The top-down and bottom-up methodologies are popular for digital IC design.

In the class, an IP hardcore will be designed based on bottom-up method first. Then the IP will be integrated in the system design based on top-down method. Thus students can learn different methods and understand SoC design process.

-End-

**课程号 (Course Number):** 04833730

**课程名称 (Course Title):** 集成电路的物理设计实验/Place and route labs

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and

Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 贾嵩

**先修课程 (Prerequisites):** 数字逻辑电路

### 中文简介:

物理设计是数字集成电路设计实现过程，通常称为布局布线(Place-and-Route)，通过将门级网表进行布局布线等过程，实现数字设计由门级向物理版图的映射。随着集成电路工艺的不断发展，深亚微米集成电路物理设计给设计者提出了新的挑战，比如在时序收敛、电压降、串扰分析等方面带来设计挑战。

集成电路的物理设计的输入文件是逻辑综合之后的门级网表，经过布图规划、布局、时钟树综合、布线、版图检查等过程，输出用于半导体加工的版图数据。

布图规划阶段：布图规划主要包括芯片的大小 (area)、输入输出I/O单元的规划、宏模块的规划和电源规划等；

布局阶段：布局的任务主要是对标准单元和宏模块的布局。为了更好地实现时序收敛需要采用时序驱动的布局方式。此外，还包括对版图进行拥塞分析；

时钟树综合：时钟网络在所有信号网络中负载最大、走线最长、要求最苛刻，因此时钟树综合的质量直接影响芯片的性能。时钟树综合包括设置、综合、优化等过程；

布线阶段：布局和时钟树综合完成后，就需要各个模块和单元通过具体的互连线连接起来，完成所有信号的互联，从而才可实现芯片的功能。具体的实施包括全局布线、详细布线和布线修正等部分，布线的效果依赖于布局的方案以及工具本身的算法。

本课程安排10个实验，通过实验内容，学习掌握集成电路物理设计的基本知识和实际操作。通过课程学习，学生可以掌握布局布线的基本方法、工具使用、优化技巧等知识。

本课程的先修课为数字逻辑电路。

本课程为实验课，上课时间安排在两周，一共10次课，每次上机4小时。

### 英文简介 (Course Description):

Physical design is the implementation process for digital ICs. It is also referred as Place-and-Route. The design process will map the gate-level netlist to layout. As the semiconductor scales down, new challenges, such as timing closure, IR drop and crosstalks arise for physical designs.

In physical design, the netlists are put in and the design is processed by floorplanning, placing, clock-tree synthesizing, routing. The layout data is outputted for fabrication.

Floorplanning: The process will handle the area, the position of IOs and macros and the planning of power rails;

Placement: The process will place the standard cells and macros. The process is often driven by timing to meet timing closure. Congestion is also analyzed.

Clock-tree synthesis: The clock network is the most loaded and longest net in the design. The network should be optimized by synthesis for better timing.

Routing: All the cells and macros will be connected in the process by global routing, detail routing and repair.

The class will arrange ten labs for students to understand the physical design

knowledge. Students will learn the basic methods, the tool application and skills for place-and-route.

The Digital Circuit is suggested as a pre-arranged class for the class.

The class will be taught in labs in 2 weeks. There are four class hours every day.

-End-

**课程号 (Course Number):** 04834370

**课程名称 (Course Title):** 虚拟现实技术/Virtual Reality Technology

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 汪国平

**先修课程 (Prerequisites):** 没有先修课程要求

#### **中文简介:**

虚拟现实技术已经成为一种重要的行业领域内容显示和技术验证手段，在国防军事、重大工程应用、工程设计以及文化娱乐等行业领域具有广泛的应用前景。虚拟现实技术是多学科综合性技术，它涉及计算机、电子和通信、机械和光电工程以及数学物理等多个学科理论和方法，与工程科学等行业相关学科都有密切关联。虚拟现实技术是当前高技术领域中的重要发展方向，也是当前发展最为迅速的信息技术方向之一。虚拟现实和增强现实统称为虚拟现实，两者在研究方法和显示方式上有所不同，但是具有相同的基础理论和方法手段。在当前虚拟现实技术发展过程中，VR+已经成为各个领域的发展热点，也是虚拟现实在各个学科和行业领域应用的发展重点，让学生了解和掌握基本的虚拟现实方法和理论，便于学生熟悉和掌握相关的技术手段，对于学生对虚拟现实技术本身的了解，以及增加学生对虚拟现实对其他行业领域发展的认识具有促进作用。

#### **英文简介 (Course Description):**

Virtual reality technology has become an important industry content display and technology verification means, which has a wide range of application prospects in national defense, military, major engineering applications, engineering design, cultural entertainment and other industries. Virtual reality technology is a multi-disciplinary comprehensive technology, which involves the theory and method of computer, electronics and communication, mechanical and photoelectric engineering, mathematical physics and other disciplines, and is closely related to engineering science and other related disciplines. Virtual reality technology is not only an important development direction in the field of high technology, but also one of the most rapid development directions of information technology. Virtual reality and augmented reality are called virtual reality. They have different research methods and display methods, but they have the same basic theories and methods. In the current virtual reality technology development

process, VR + has become a development hotspot in various fields, and it is also the development focus of virtual reality application in various disciplines and industry fields, so that students can understand and master the basic virtual reality methods and theories, so that students can be familiar with and master relevant technical means, understand virtual reality technology itself for students, and increase students' understanding of virtual reality technology. Virtual reality can promote the development of other industries.

-End-

**课程号 (Course Number):** 04834500

**课程名称 (Course Title):** 量子信息技术概论/Introduction to Quantum Information Technology

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 吴腾

**先修课程 (Prerequisites):** 本课程主要面向信科、物理、元培等其他相近专业低年级本科生，无特别先修课程要求。如具备线性代数、原子物理、光学、量子力学等相关课程的初步知识，则更好。

#### **中文简介:**

本课程主要讲授与量子信息技术有关的基础知识、发展现状和未来趋势，以期拓展学生在量子信息技术领域的知识面，培养学生对量子信息的兴趣。本课程采用专题讲座式教学方式，授课形式以幻灯片为主、辅以一定的黑板板书。本课程包括 16 个专题讲座，内容涵盖：量子信息的概念和历史、与量子信息技术有关的基本概念、量子计算、量子保密通信、量子精密测量、核磁共振等前沿量子信息技术的发展现状及未来趋势。

#### **英文简介 (Course Description):**

This course introduces the basics, the current status and the future of the quantum information technology, and aims at broadening the students' knowledge and cultivating their interests in this field. The course consists of 16 talks, the topics of which include but not limited to the history of the quantum information technology, some basic conceptions such as wave-particle duality, entanglement, atomic structure, and the current status and future of quantum computing, quantum communication, quantum precision measurement and some other typical and important quantum information technologies.

-End-

**课程号 (Course Number):** 04834710

**课程名称 (Course Title):** 自旋与超导量子技术导论/Introduction to Spintronic and Superconducting Quantum Technology

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 王润声

**先修课程 (Prerequisites):** 本课程主要面向信息科学（电子、微电子/集成电路、计算机、人工智能等）、物理、材料等其他相近专业二三年级本科生，无特别先修课程要求。但需要具备一点编程的基本知识（如Python/Matlab/Mathematica等）。如具备线性代数、量子物理等相关课程的初步知识，则更好。

**中文简介:**

本课程介绍自旋电子学和量子信息科学中的基本概念、器件技术、电路及算法应用。该课程包括课堂讲授和有关动手学习仿真工具的补充教程。希望学生通过动手作业（使用仿真工具）展示运用基本原理理解自旋电子学和超导量子技术的能力。本课程将邀请香港科技大学邵启明教授联合讲授。

**英文简介 (Course Description):**

This course introduces concepts, devices, and applications in spin electronics and quantum information science. The course includes lectures and supplemental tutorials for hands-on learning tools. Students are expected to demonstrate the capability of applying fundamental principles to understand spintronic and superconducting quantum devices through hands-on homework projects. The course will be co-instructed by Prof. Qiming Shao of Hong Kong University of Science and Technology.

-End-

**课程号 (Course Number):** 04835270

**课程名称 (Course Title):** 自动驾驶技术赏析/Self-driving Technology Appreciation

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 赵卉菁

**先修课程 (Prerequisites):** 无

**中文简介:**

自动驾驶技术 (Autonomous driving; Self-driving) 是一个综合了移动机器人、人工智能、计算机视觉、传感器等学科的高新技术，在交通运输、物流服务、工业自动化等领域有着重要的

应用。自动驾驶技术是当前科技研究的热点，近年来有着迅猛的发展，受到社会各界的广泛关注。本课程充分发挥自动驾驶技术发展的特点，利用相关的视频演示、媒体报道、主题演讲、技术分析、学术论文等多媒体材料，以自动驾驶系统典型案例的技术欣赏和分析入手，由浅入深地教授自动驾驶相关的理论基础知识，引导学生理解自动驾驶技术的主要思路与挑战。本课程分6个专题教授自动驾驶相关的理论知识，包括自动驾驶系统、架构与关键技术、自动驾驶地图、标准与测试、自动驾驶与社会、应用场景，最后通过专题研讨，使得学生在获得理论知识的基础上，具备对自动驾驶技术现状与挑战的综合分析与评价能力。

#### **英文简介 (Course Description):**

Autonomous driving technology is a high-tech that integrates mobile robotics, artificial intelligence, computer vision, sensors and other disciplines, and has important applications in transportation, logistics services, industrial automation and other fields. Autonomous driving technology is the current hot spot of scientific and technological research, with rapid development in recent years, receiving wide attention from all walks of life. This course is designed to exploit the characteristics of the fast development of autonomous driving technology and uses relevant video demonstrations, media reports, keynote speeches, technical analysis, academic papers and other multimedia materials to teach the theoretical fundamentals related to autonomous driving from shallow to deep, starting with technical appreciation and analysis of typical cases of autonomous driving systems, and guiding students to understand the main ideas and challenges of autonomous driving technology. This course teaches theoretical knowledge related to autonomous driving in six topics, including autonomous driving systems, architecture and key technologies, autonomous driving maps, standards and testing, autonomous driving and society, scenarios, and finally, through thematic seminars, enables students to acquire theoretical knowledge and have the ability to comprehensively analyze and evaluate the current situation and challenges of autonomous driving technology.

-End-

**课程号 (Course Number):** 04835280

**课程名称 (Course Title):** 纳米离子学控制下的纳米电子学/Nanoionics controlled nanoelectronics

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 1

**授课教师 (Faculty):** 杨玉超

**先修课程 (Prerequisites):** Students having background in physics, chemistry or engineering

**中文简介:**

本课程将介绍纳米离子学基础，以及讲授其纳米电化学过程如何应用于优化纳米电子学器件，为相关专业的学生提供了解相关领域国际学术前沿的课程内容。

**英文简介 (Course Description):**

Understanding fundamentals of nanoionics and nanoelectrochemistry and how these processes can be used for improving (nano)electronic devices. The course will present basic electrochemical thermodynamics and kinetics and solid state ionics with emphasis on the specifics of the nanosystems. A special focus will be set on the relation between material properties – electrochemical processes and device performance /functionalities. As an example for applications will serve redox-based memristive device (ReRAMs). The capability of the nanoionics approach will be highlighted. The course will offer as well presentation and discussion of methods and techniques for practically performing nanoionics studies with highest lateral and depth resolution resolution and precision.

-End-

**课程号 (Course Number):** 04835290

**课程名称 (Course Title):** 模拟集成电路设计方法、工具与流程/Analog Integrated Circuits Design Method, Tools and Flow

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 2

**授课教师 (Faculty):** 叶乐

**先修课程 (Prerequisites):** 高等数学

电路原理/电路分析

模拟电子电路/模拟集成电路设计

数字电子电路/数字集成电路设计

线性代数、概率论

信号与系统

微电子学或半导体物理学

C 语言编程

**中文简介:**

模拟集成电路设计不仅需要依赖扎实的基础理论知识体系，还需要充分掌握模拟EDA工具以设计流程。本课程通过2周的实训，可使参加实训的学生快速提升模拟集成电路设计的实践能力，弥补理论知识课程与实际IC工程实践要求之间的脱钩问题，为培养满足实际需要的模拟 IC 设计人才打下坚实基础。

本课程具有以下亮点：与传统基于美国EDA工具进行实验教学有所不同的是，本课程将使用国产EDA 全流程设计软件，来进行模拟集成电路设计的教学和实践训练。课程完整囊括了模拟 IC

设计的所有环节，包括：电路图原理设计、原理图仿真、波形分析调试、多工艺角分析和蒙特卡洛分析、Schematic Driven Layout、版图设计、DRC/LVS 物理验证、寄生参数提取、后仿真以及数模混合设计和仿真的全流程，从而可以系统化、立体化地培养学生的模拟 IC 设计能力。此外，本课程还包括了丰富的实际案例的教学内容，包含：电路原理讲解、案例分析、以及大量的动手实验。由一个在模拟 IC 项目中最常用的典型电路项目贯穿，将知识点融入项目原理、设计、开发、优化全过程中，实现做中学。

本课程邀请华大九天技术专家共同授课，华大九天是我国EDA龙头企业，其模拟集成电路设计流程EDA工具，已经完成了全体系的国产自主可控，保障了我国在模拟芯片、数模混合芯片等领域的EDA自主可控和产业链安全，部分指标甚至局部超越美国EDA巨头公司；然而现有绝大多数集成电路设计的学生培养，绝大多数均是依赖于美国EDA三巨头的软件工具所展开的，随时面临着被卡脖子的风险；开展基于国产EDA工具进行模拟集成电路设计方法、工具和流程的培养，对于培养能够支撑国家芯片产业安全和自主可控的高素质人才，具有十分重要的意义。

### **英文简介 (Course Description):**

Analog integrated circuit design not only needs to rely on a solid theoretical knowledge system, but also needs to fully master the analog EDA tools to design the process. Through two weeks of training, this course can enable students participating in the training to quickly improve the practical ability of analog integrated circuit design, make up for the decoupling problem between the theoretical basic knowledge course and the practical requirements of actual IC engineering, and lay a solid foundation for training analog IC design talents to meet the actual needs.

This course has the following highlights: Different from the traditional experimental teaching based on American EDA tools, this course will use domestic EDA full-process design software to carry out the teaching and practical training of analog integrated circuit design. The course covers all aspects of analog IC design, including circuit diagram schematic design, schematic diagram simulation, waveform analysis and debugging, multi-process angle analysis and Monte Carlo analysis, Schematic Driven Layout, layout design, DRC/LVS physical verification, parasitic parameter extraction, post-simulation, and the whole process of digital-analog hybrid design and simulation, so as to systematically and stereoscopically cultivate students' analog IC design ability. In addition, this course also includes rich teaching contents of practical cases, including circuit principle explanation, case analysis, and a large number of hands-on experiments. Through a typical circuit project that is most commonly used in analog IC projects, knowledge points are integrated into the whole process of project principle, design, development and optimization to achieve learning by doing.

This course invites technical experts from Huada Jiutian to teach together. Huada Jiutian is a leading EDA enterprise in China, and its analog integrated circuit design process EDA tools have completed the entire system of domestic independent control, ensuring the EDA autonomy and industry chain security in the fields of analog chips, digital analog hybrid chips, and other fields in China, with some indicators even partially surpassing the EDA giants in the United States; However, the vast majority of existing integrated circuit design students' training relies

on the software tools of the three EDA giants in the United States, and they are at risk of being stuck at any time; Developing the training of analog integrated circuit design methods, tools, and processes based on domestic EDA tools is of great significance for cultivating high-quality talents capable of supporting the safety and autonomous control of the national chip industry.

-End-

**课程号 (Course Number):** 04835300

**课程名称 (Course Title):** 人工智能前沿/Frontiers of Artificial Intelligence

**开课院系 (School/Department):** 信息科学技术学院/School of Electronics Engineering and Computer Science

**学分 (Credits):** 1

**授课教师 (Faculty):** 王乐业, 董豪, 仇尚航

**先修课程 (Prerequisites):** 人工智能基础/引论

#### 中文简介:

人工智能前沿课程将探讨最新的人工智能技术和发展趋势。本课程将从机器学习、深度学习、自然语言处理、计算机视觉、强化学习等人工智能研究领域出发, 涵盖自动驾驶、人机交互、机器人、医疗保健、金融科技等领域的应用案例。学生将学习如何应用人工智能解决实际问题, 并了解人工智能的前沿领域, 发展趋势及其对社会和工作的影响。

#### 英文简介 (Course Description):

The frontiers of artificial intelligence course will explore the latest AI technologies and trends. This course will introduce fundamental concepts such as machine learning, deep learning, natural language processing, computer vision, and reinforcement learning, and cover application cases in fields such as autonomous driving, human-machine interaction, robotics, healthcare, and fintech. Students will learn how to apply AI to solve real-world problems and understand the development trends of AI and its impact on society and work.

-End-

**课程号 (Course Number):** 06239083

**课程名称 (Course Title):** 经济学社会实践/Field Work in Economic Study

**开课院系 (School/Department):** 国家发展研究院/National School of Development

**学分 (Credits):** 2

**授课教师 (Faculty):** 徐晋涛, 蒋少翔

**先修课程 (Prerequisites):** 经济学原理

**中文简介:**

本课程以教师指导学生进行企业参访和实习，田野调研等多种形式开展。引导学生走出校门、接触社会、了解国情与民生，使理论与实践相结合，让学生在企业和乡间走访过程中，了解社会状况，指导学生利用调查实践中的数据和信息进行科学研究，撰写研究论文，并加深对科学研究成果的理解。此外，还可以培养学生增强大学生服务社会意识。

**英文简介 (Course Description):**

This course is carried out in various forms, such as teachers guiding students to conduct enterprise visits and internships, field research, etc. Guide students to go out of school, get in touch with society, understand national conditions and people's livelihood, combine theory and practice, let students understand social conditions during company and rural visits, guide students to use data and information in survey practice for scientific research and write research Papers, and deepen the understanding of scientific research results. In addition, students can be trained to enhance their sense of serving society.

-End-

**课程号 (Course Number):** 06239139

**课程名称 (Course Title):** 量化金融专题/Topics in Quantitative Finance

**开课院系 (School/Department):** 国家发展研究院/National School of Development

**学分 (Credits):** 2

**授课教师 (Faculty):** Tai

**先修课程 (Prerequisites):** 微积分，线性代数，概率论，随机过程

**中文简介:**

本课程旨在介绍及探讨与量化金融相关的数学，经济及物理模型。课题着重于投资组合的建构，波动率估计与建模，利率相关产品与建模，以及最佳执行策略。基于应用所需，本课程前一小段将着重于随机控制理论与统计学习相关知识的简介。学生修完成课程应具备量化金融模型的基础知识及其与应用相关的技术。

**英文简介 (Course Description):**

The course aims at introducing quantitative models in finance from economics, mathematics, and physics viewpoints. Financial problems covered in the course include portfolio management, volatility estimation and modeling, optimal order execution under price impact, and interest rate related products and their modeling. In order to prepare the student into the core, part of the course offers a crash course on stochastic control theory in discrete time and the theory of statistical learning. Upon completion, students are expected to understand the quantitative models covered in the course and possess basic skills to implement

the models.

-End-

**课程号 (Course Number):** 06732040

**课程名称 (Course Title):** 经济学视角下的教育世界/Economics of Education

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 马莉萍

**先修课程 (Prerequisites):** 无

#### **中文简介:**

教育政策是世界范围内教育领域的重要研究课题。过去二十年来，世界经济学家致力于教育政策的研究，并做出了重要贡献。本课程旨在帮助学生在掌握经济学基本原理和主要分析方法的基础上，理解经济学家如何思考教育政策的制定、实施和评估，并建立分析教育政策的经济学思维及方法体系。

本课程以专题研讨的形式组织，在每一专题下，选取一到两项在国内外具有重要影响的教育政策或改革项目，梳理政策的起源和发展，分析经典实证研究，讨论可能的解决思路、评估方案及发展方向。学生通过本课程的学习，将能够系统了解教育经济领域的前沿研究，并熟练地运用经济学的思维和方法分析研究现实中的教育政策，为将来从事社会科学研究奠定一定的理论和方法基础。

#### **英文简介 (Course Description):**

Over the past twenty years economics has made a number of contributions to understanding the role of education in the wider economy and the effectiveness of various education policies. This course provides a broad overview of the different issues in education that economists study. Through readings and discussion we will study the various aspects of the intersection of economics and education policy.

The goal for this course is to provide you with a broad understanding of the issues that arise at the intersection of education and economic policy, to be able to make judgments about the effectiveness of various education policies based on current research, and to be able to make cogent and effective arguments about appropriate policy recommendations. Thus upon completion students should be capable of thoroughly reading and criticizing research papers using econometric techniques in applications and to know when it is appropriate to apply such techniques to their own research.

This course will cover topics in the economics of education policy through reading and discussion of seminal papers and latest research. Specific topics chosen will be determined by the instructor with input from the students and may include, but

are not limited to, school choice, peer effects, class size, teacher incentives, online education, college access, financial aid, college graduates' employment etc.

-End-

**课程号 (Course Number):** 06733010

**课程名称 (Course Title):** 媒介与教育演变/Internet: a new communication ecosystem of Education

**开课院系 (School/Department):** 教育学院/Graduate School of Education

**学分 (Credits):** 2

**授课教师 (Faculty):** 郭文革

**先修课程 (Prerequisites):** 无

### 中文简介:

本课程以媒介环境学的一组经典著作阅读为主线,带领学生穿越人类历史上5次重要的媒介技术发展阶段,体验媒介技术对社会演进、知识生产,以及教育教学发展的影响;从历史深度和知识产业广度上,理解互联网对教育、教学和个人发展的影响。

媒介技术发展的5个阶段及相关经典著作如下:

1、口传阶段:公元前4世纪中叶以前

经典阅读: (1)[美]沃尔特·翁,口语文化与书面文化[M],何道宽译,北京大学出版社,2008  
(2)BBC纪录片:诺亚方舟:一个真实的故事

2、手工抄写阶段:公元前4世纪中叶 to 15世纪中叶古登堡印刷机之前

经典阅读: (1)[美]沃尔特·翁,口语文化与书面文化[M],何道宽译,北京大学出版社,2008  
(2)BBC 纪录片《书香》第一集 圣经、第二集 中世纪巨著  
(3)(法)雅克·勒戈夫,中世纪的知识分子,商务印刷馆,1996  
(4)BBC 纪录片 奢侈品的历史:负罪的愉悦.第2集.中世纪的声色犬马,2011  
(5)奥斯卡获奖纪录片:凯尔经的秘密

3、印刷技术:15世纪中叶 to 至今

经典阅读: (1)[美]伊丽莎白·爱森斯坦著,作为变革动因的印刷机-早期近代欧洲的传播与文化变革[M],何道宽译,北京大学出版社,2010  
(2)[加]埃里克·麦克卢汉,弗兰克·秦格龙编,何道宽译,麦克卢汉精粹,南京大学出版社,2000  
(3)电影:后天

4、电子媒介:18世纪30年代 至今

经典阅读: (1)[美]Neil Postman著,吴燕荃译,童年的消失[M],广西师范大学出版社,2004  
(2)[美]Neil Postman著,章艳译,娱乐致死[M],广西师范大学出版社,2004  
(3)[美]约书亚·梅罗维茨著,肖志军译,消失的地域:电子媒介对社会行为的影响[M],清华大学出版社,2002  
(4)电影:楚门的世界、摇尾狗

5、数字媒介:20世纪90年代至今

经典阅读: (1)[英]维克托·迈尔-舍恩伯格,肯尼思·库克耶著,盛杨燕,周涛译,大数据时

代-生活、工作与思维的大变革，浙江人民出版社，2013

(2) 电影：鹰眼、社交网络、黑客帝国、人工智能、她等。

(3) 视频：TED讲座、视频公开课、晓说、晓松奇谈、罗辑思维等。

课程的核心讨论话题：

1、媒介技术怎样影响社会发展 借助于1) 波普尔 三个世界 理论；2) 哈耶克：分离的个人知识；3) 科斯：交易成本等理论，分析淘宝、蚂蚁金服、AlphaGo等典型案例。

2、媒介技术怎样影响教育发展：以文艺复兴时代为例，对[美]伊丽莎白·爱森斯坦著，作为变革动因的印刷机-早期近代欧洲的传播与文化变革[M]一书中涉及的地图、神学、医学、科学等发展脉络进行解析和梳理；对当下互联网+教育的事例进行批判和分析。

### 英文简介 (Course Description):

Internet: a new communication ecosystem of Education

Course Introduction:

Education is the transmission of human experience and wisdom in longitudinal dimension, without media, instruction will not happen. Media, the new or the traditional, can be defined by symbol system, carrier, replication of content, and the character of one-way and two-way deliver. Replaying the education history, each “new media”, included the oral Chant, papyrus, Printing Press, Radio and television and Internet, changed the system of recording, collecting, delivering and publishing human’s observations, wisdom and knowledge at first; and then, restructured the structure of education communication; and finally re-coined the whole education system.

The Outline of Course:

Module 1. Rethinking Education

What is the meaning of Education? Illiterate vs. Literate

Hand-on Experience and Second-hand Knowledge

Module 2. The outline of education history: the perspective of media technology evolution

Oral Chant

Artificial Press: Papyrus, parchment paper

Machine Printing

Broadcast and Television

Internet

Module 3. The transformation of Knowledge industry

Knowledge Generation Model I

Knowledge Generation Model II

Module 4. The innovative Model of Instructional system

Digital Literacy

The Model of Internet-based Instructional System: Student, Teacher, Learning Setting, Learning Material, Learning Activity, Feedback and Assessment, Learning Management System, and etc

-End-

**课程号 (Course Number):** 06733020

**课程名称 (Course Title):** 游戏化创新思维/The innovation thinking of Gamification

**开课院系 (School/Department):** 教育学院/Graduate School of Education

**学分 (Credits):** 2

**授课教师 (Faculty):** 尚俊杰

**先修课程 (Prerequisites):** 如果学过游戏设计等相关课程，会有帮助，但不是必需的。

### 中文简介:

所谓游戏化 (Gamification)，指的是将游戏或游戏元素、游戏设计和游戏理念应用到一些非游戏情境中。比如在市场营销中应用游戏或游戏理念。游戏化目前在教育培训、产品设计、人力资源管理、市场营销等领域都有广阔的应用，比如微信红包等案例。

游戏化其实有很长的研究历史，但是2010年在商业领域流行开以后，引起社会广泛关注。沃顿商学院的凯文·韦巴赫也在Coursera上开设了《游戏化》课程，非常受欢迎。

本课程负责人尚俊杰老师长期研究游戏化学习，对于游戏化有丰富的研究经验，在之前面向研究生、本科生开设的课程中也涉及到了相关内容。本次希望引导同学进行更加深入的探讨，将采用项目学习方式，通过讲授、案例分析、小组讨论和项目设计等，希望让同学们全面了解游戏化的概念、内涵、应用领域、应用方法和策略等内容，同时也希望能够借此促进当前的创新创业教育。

### 英文简介 (Course Description):

Gamification is the application of game, game-design elements and game principles in non-game contexts. Gamification in marketing is a typical case to apply game and game concepts in business. Nowadays, gamification has been widely applied in educational training, product design, human resource management and marketing, such as the Red Envelop in Wechat.

Gamification has a very long history, but it attracted great attention after 2010 when gamification became popular in business. Kevin Werbach from Wharton School provided a course Gamification in Coursera, which has achieved a huge success.

Prof. Junjie Shang, the leading lecturer of this course, has continuously been devoted to the study of game-based learning, and based on his rich study experiences, Prof. Shang has introduced the concept of gamification during the courses for undergraduate and graduate students. This course will encourage students get engaged and make in-depth discussions in the project-based learning through lectures, case study, group work and product design, and expects students to develop a deep understanding of the concepts, meaning, application and strategies of gamification, which will also contribute to the innovation

education.

-End-

**课程号 (Course Number):** 12632140

**课程名称 (Course Title):** 生态学控制实验野外实习/Field Experiments in Global Change Ecology

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 贺金生

**先修课程 (Prerequisites):** 植物学

**中文简介:**

本课程为实践类课程。

在《普通生态学I, II》基础理论学习的基础上,通过野外实习,掌握生态学实验设计的基本原理,实地了解国际上先进的生态学控制实验设施及运行,实习野外仪器的操作、实验数据的收集过程。通过野外的实习、讨论,深度参与到生态学科学实验的主要过程。

**英文简介 (Course Description):**

This is a practical field course. After the study of "General Ecology I", and "General Ecology II", this course provides students the opportunity to learn the basic principles of design of ecological experiments, to understand and practice the operation processes of advanced ecological field experimental facilities, practice field instruments, data collection process. Through field practice and discussion, they will be deeply involved in the main process of ecological experiments.

-End-

**课程号 (Course Number):** 12633070

**课程名称 (Course Title):** 自然地理综合实习/Integrated Practice of Physical Geography

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 蒙吉军, 王红亚, 许学工

**先修课程 (Prerequisites):** 无

**中文简介:**

自然地理综合实习选择黄河下游的黄河三角洲和中游的郑州-开封段，开展大尺度空间分异规律的实习及局地尺度自然综合体的实习，从流域的角度，通过水分循环将自然地理环境中格局与过程结合起来，建设从点到面的、综合性野外实习基地，为学生开展野外自然地理实践提供平台。通过实习，使学生得到综合的自然地理野外训练。实习内容包括地质、地貌、气候、水文、土壤、植被、景观及土地利用方面，在以往部门地理（地貌、土壤、植被）实习的基础上，分析自然地理各要素之间的关系，建立自然地理环境整体性的思维，加深对综合自然地理课堂教学内容的理解，加强理论与实践的结合，培养学生的地理思维及分析问题、解决问题的能力，为学生从事科研工作奠定良好的野外工作能力。

**英文简介 (Course Description):**

Comprehensive practice of physical geography is carried out in the delta in lower Yellow River and part of middle Yellow River from Zhengzhou to Kaifeng to illustrate the rule of spatial differentiation in large scales and the natural complex in local scales. From the perspective of river basin, it combines the physical geography pattern and process by means of hydrologic cycle, constructs a comprehensive field practice base from point to surface, aiming at providing a comprehensive physical geography field training for students. This course contains aspects such as geology, topography, climate, hydrology, soil, vegetation, landscape and land use, analyzes the relationship between the various physical geography elements on the previous basis of sectorial geography. Through the course, students can get an integrated thinking of natural geographical environment, understand the content of integrated physical geography taught in class more deeply, strengthen the combination of theory with practice, and form a geographic thinking as well as the ability to analyze and solve problems, also can develop good field work ability for future scientific research.

-End-

**课程号 (Course Number):** 12633130

**课程名称 (Course Title):** 陆面过程模型和植被遥感实习/practice of land surface model application and vegetation remote sensing

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 朱丹

**先修课程 (Prerequisites):** 建议选修本课程的学生上个学年(近期)选修过“地表过程模拟和监测”，“遥感原理与应用”和“古气候与古环境”。

**中文简介:**

陆面过程模型和植被遥感实习是为城市与环境学院自然地理专业或其他对陆面过程模型和植被遥感实践操作感兴趣的本科生和研究生开设的实习课程。课程主要包括三部分的核心内容：(1)

陆面过程模型与遥感软件的运行环境，包括学习操作系统和作业调度系统的使用、认识编译和连接、学习使用脚本与模型交互 (2) 陆面过程模型(ORCHIDEE)的应用实践，包括学习ORCHIDEE模型的基本构架、光合作用和土壤温度模块的基本原理、在站点和区域尺度上运转ORCHIDEE模型 (3) 植被遥感的应用实践，包括学习植被遥感数据处理的基本流程、认识植被光能利用率模型、在区域尺度上分析植被光合作用的变化及其驱动因素。

**英文简介 (Course Description):**

The “Practice of land surface model and vegetation remote sensing” is the practice course designed for undergraduate and postgraduate students majoring in physical geography or students interested in working on land surface models and vegetation remote sensing. There are three core components of the course: 1) the environment of operating land surface model and remote sensing, including the operation system and the job distribution system; 2) the practice of the land surface model (ORCHIDEE), including the model structure, the formulation of photosynthesis and soil temperature, and the guidance on running site and regional simulations; 3) application of vegetation remote sensing, including the working flow of remote sensing data processing, the formulation of light use efficiency based photosynthesis model, and the guidance on analyzing spatio-temporal variations in vegetation photosynthesis.

-End-

**课程号 (Course Number):** 12634070

**课程名称(Course Title):** “一带一路”综合实习/“The Belt and Road” Comprehensive Practice

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 刘鸿雁, 林坚

**先修课程 (Prerequisites):** 人文地理学

**中文简介:**

本课程为区域城乡综合发展与城乡生态环境认知学习的综合性实习课程。授课对象为城市与环境学院本科高年级学生。目的在于通过实习，让学生认识不同地理环境、不同发展阶段、不同发展类型的国家和地区，在城乡发展中的资源利用、经济社会活动的空间组织、城乡发展建设规划管理等方面的特征和问题、机制和规律、对策和经验。

结合“一带一路”倡议，每年在相关国家的典型地区中选择实习地点，通过综合实习促进学生对不同地区发展状况的认识，开展比较研究，加深理论认识，提高专业学术水平，锻炼综合分析问题的能力。

该课程实习地点为日本东京都市圈地区。针对该地区的特点，主要教学内容包括：

- (1) 大都市圈空间发展与产业转型升级
- (2) 超大城市交通空间组织

- (3) 大都市地区历史文化风貌保护与利用
- (4) 大都市地区郊区化与空间重构
- (5) 新城新区的发展路径及成效（筑波科学城）
- (6) 港口城市转型升级（横滨）

**英文简介 (Course Description):**

This course is a comprehensive practical course for the recognition and learning of regional comprehensive development and ecological environment of urban and rural areas. The subjects of the lecture are senior undergraduates of the college of urban and environmental sciences. The purpose is to enable students to understand different geographical environment, stages of development and development types of countries and regions through the practice. The purpose is also to make students understand the characteristics, problems, mechanisms, rules, countermeasures and experiences of resources utilization, spatial organization of economic and social activities, and planning and management of urban and rural development and construction in countries and regions with different geographical environments, different stages of development and different types of development. According to "The Belt and Road" initiative, we choose the practice place annually in the typical area of relevant countries, through the comprehensive practice to promote students' understanding of the development of different regions. Through comparative study, students can deepen their theoretical understanding, improve the professional academic level and exercise the ability of comprehensive analysis.

The course is carried out in the metropolitan area of Tokyo, Japan. According to the characteristics of the area, the main teaching contents include:

- (1) Spatial development and industrial transformation and upgrading of metropolitan area
- (2) Super city traffic space organization
- (3) Protection and utilization of historical and cultural features in metropolitan areas
- (4) The suburbanization and spatial reconstruction of metropolitan areas
- (5) Development path and effectiveness of new town and district (Tsukuba Science City)
- (6) Transformation and upgrading of port cities (Yokohama)

-End-

**课程号 (Course Number):** 12634080

**课程名称 (Course Title):** 人文地理专业综合实习/Comprehensive Practice of Human Geography

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 冯健, 曹广忠, 刘宇, 刘刚

**先修课程 (Prerequisites):** 人文地理, 经济地理学, 城市地理学, 产业地理学, 城市社会学

**中文简介:**

本课程面向人文地理与城乡规划专业已完成专业基础课学习和部分专业课学习的学生, 属于专业综合实习类课程。课程集中7-10天时间考察城乡发展中的资源利用、典型业态、城乡聚落发展中的人文地理现象。学生在综合了解城乡区域空间发展的基础上, 选择典型要素或典型地域发展作为研究对象, 独立完成实习报告。

**英文简介 (Course Description):**

This course is taught to the senior students (the end of year 2). It is a core course for human and urban and rural planning major. The course lasts 60 teaching hours mainly in 7-10 days with field work. The field investigations include urban and rural planning and urban development, non-agriculture and agriculture industries development, the use and protection of resources during regional development, the distribution and development of town and villages under the contest of urbanization, etc. Each student should submit a practice report combined with field investigation and independent research.

-End-

**课程号 (Course Number):** 12634090

**课程名称 (Course Title):** 人文地理综合社会实践实习/Social and Professional Practice of Human Geography

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 冯健

**先修课程 (Prerequisites):** 人文地理, 经济地理系, 城市地理学, 产业地理学, 计量地理与规划系统工程学, 区域分析与区域规划,

**中文简介:**

本课程面向人文地理与城乡规划专业高年级学生, 属于综合实践实习类课程。课程以在暑期开展为主, 学生分组参与老师主持的理论和实践类科研项目, 参与项目整体讨论, 并承担具体的科研工作任务。通过实践实习, 综合了解城乡发展实践中的地理现象和空间规律, 了解运用人文地理理论方法参与社会服务的基本程序和方法。

**英文简介 (Course Description):**

This course is taught to the senior students (the end of year 3). It is a core

course for human and urban and rural planning major. The course lasts about two months for every students by attending theory or practice projects about urban and rural development managed by teacher. Students should attend the discussion about the project and complete some specific task of the project. Students should learn to use the theory and methodology of Human Geography to analyze the issues in urban and rural development practice.

-End-

**课程号 (Course Number):** 12635390

**课程名称 (Course Title):** 美术实习/Practice of Fine Arts

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 沈文权

**先修课程 (Prerequisites):** 美术: 素描与色彩

**中文简介:**

美术实习目的在于培养城乡规划专业学生认识和表现城市空间的能力, 提高造型艺术修养, 锻炼手绘技能。实习内容以城市建筑和风景园林写生为主。实习地点在北京市城区和近郊。

**英文简介 (Course Description):**

This course of art practice is set up for the major of urban and rural planning. The purpose is to cultivate the ability of students to cognize and express urban space, exercise hand-painted skills and improve formative art cultivation. The practice mainly focuses on urban, architecture and landscape painting. The practice sites are generally in the urban and suburban areas of Beijing.

-End-

**课程号 (Course Number):** 12639010

**课程名称 (Course Title):** 综合社会实践实习/Comprehensive Social Practice Practicum

**开课院系 (School/Department):** 城市与环境学院/College of Urban and Environmental Sciences

**学分 (Credits):** 1

**授课教师 (Faculty):** 林坚

**先修课程 (Prerequisites):** 本科三年级结束后的城市规划专业学生

**中文简介:**

城市规划是理论与实践紧密结合的学科，综合社会实践实习课，要求学生直接参与教师的具体研究或实践的课题工作，使学生在本专业相关实践中运用所学的理论知识，加深课堂知识的理解，初步掌握相关研究和实践的调研、资料查阅、数据分析、图件绘制等基本方法。

该课程由城市与区域规划系、城市与经济地理系全体教师共同承担，各位老师根据自己的科研项目，安排实习同学的实习内容。两系教师的研究方向涵盖了人文地理和城市规划的各相关领域。

**英文简介 (Course Description):**

Urban planning is a subject which connects theory with practice closely. This course, Comprehensive Social Practice Practicum, requires students to participate in the specific research or projects of their teachers directly so that the students will use their professional knowledge in practice. This course will help students understand the knowledge in lecture deeply and have initial grasp of the basic methods of research and practice on investigation, data collection, data analysis, map drawing, etc.

-End-

**课程号 (Course Number):** 12733110

**课程名称 (Course Title):** 大气化学基础/fundamental of Atmospheric chemistry

**开课院系 (School/Department):** 环境科学与工程学院/College of Environmental Sciences and Engineering

**学分 (Credits):** 2

**授课教师 (Faculty):** 叶春翔

**先修课程 (Prerequisites):** 无先修要求，但选课同学应该不讨厌化学学科，可以暂时不了解环境学科。重要信息：课程对讨论和阅读的投入有一定要求，同时开卷考试题目据往届同学反映偏难，得分95分以上同学比例小。

**中文简介:**

我们生活在一个快速变化的大气环境中。日常交谈中遇到专业主题，我们能否给出更“专业”的回应。对于有所认知的空气污染、健康不良结局、气候变化等，我们怎么系统描述？如何判断自己是否适合“大气环境”相关的科研道路？课程希望建立“物性-分布的决定因素-环境影响”的简单分析逻辑，着重从化学原理角度，去理解千变万化的环境现象和环境问题。

**英文简介 (Course Description):**

A detailed introduction to air pollution, e.g., photochemical smog, PM2.5, POPs and important pollutant: its concentration, distribution and chemical transformation.

-End-

**课程号 (Course Number):** 12739040

**课程名称 (Course Title):** 环境综合实习一/Environmental Integrated Fieldwork One

**开课院系 (School/Department):** 环境科学与工程学院/College of Environmental Sciences and Engineering

**学分 (Credits):** 1

**授课教师 (Faculty):** 刘兆荣

**先修课程 (Prerequisites):** 实习环节安排在《环境问题》课程之后，学生对可持续发展的环境保护概念有了初步认知。

### 中文简介:

本课程为认知实习，是为环境科学与工程专业本科生安排的首次系统的、综合性的实践环节。本实习环节安排在《环境问题》课程之后，学生对可持续发展的环境保护概念有了初步认知。通过现场参观、访谈等环节，引导学生在实践中了解环境问题的由来和针对环境问题所采取的措施，认识人类活动与环境变迁的相互影响、相互依存的关系，体会可持续发展的重要性和必要性。通过认识环境保护工作的重要性，加深对本专业的了解，增强学习兴趣。

本实习环节立足东南沿海高新区，以珠海为中心建立实习基地，以环境保护、生态多样性保护、城市可持续发展与环境保护为主线，组织学生对自然生态环境和城市环境进行全方位的考察，包括河流、湖泊、水库等水体环境，从给水到排水的整体流程，从大气环境背景到城市区域空气质量的质量监测，从废物产生到储运、处置的全过程监督，从政府监管到企业参与环境保护，从城乡建设到经济与生态共赢，实地了解环境保护、环境监测、污染处置、城乡建设工作的意义和价值。

实习内容以主题线路串连，实习过程以观察、讲解、访谈和讨论方式展开，本着“且行且思且学”的原则，学生在考察中“看到”环境问题所在，“思考”环境问题发生的根由和解决之道，“学习”其中包含的环境科学与工程的专业知识，体会环境保护和可持续发展的重要性和必要性。

### 英文简介 (Course Description):

This course is the cognitive practice. It is the first systematic, integrated practice session for the environmental science and engineering undergraduates. The practice sessions scheduled after "environmental issues" course. Students had got the initial concept of sustainable development awareness. Through site visits, interviews and other sectors, this course should guide students to understand the origin and measures taken for environmental issues, environmental problems in practice, understanding the interaction and interdependence between human activities and environmental changes, and appreciate the importance of sustainable development necessity. By recognizing the importance of environmental protection, the students should get a better understanding of the profession and enhance their interest in learning.

The practice session is based on the southeast coast of Hi-tech Zone, and should establish practice bases around Zhuhai. Along the main line with environmental protection, biodiversity protection and sustainable urban development and environmental protection, the students should be organized to inspect fully on the

natural environment and the urban environment, which include the water environment of rivers, lakes, reservoirs, etc. From the whole process of the water to the drain, from the background atmosphere to the ambient air quality monitoring in urban areas, from the entire supervise process of waste generation to storage and disposal, from government regulation to business participation in environmental protection, from the urban construction to economic and ecological co-benefit, the students should learn more meaning and value about environmental protection, environmental monitoring, pollution disposal, urban and rural construction work.

Internship contents are stringed up with theme line series. The fieldwork process include observation, explanation, interview and discussion Based on the principle of "thinking and learning while walking", the students "see" the environment problem in the study of the fieldwork, and "think" root causes and solutions of the environmental issues, and "learn" environmental science and engineering expertise which are included inside, and experience the importance and necessity of environmental protection and sustainable development.

-End-

**课程号 (Course Number):** 12739060

**课程名称 (Course Title):** 环境综合实习二/Environmental Integrated Fieldwork Two

**开课院系 (School/Department):** 环境科学与工程学院/College of Environmental Sciences and Engineering

**学分 (Credits):** 1

**授课教师 (Faculty):** 刘兆荣

**先修课程 (Prerequisites):** 环境监测, 环境监测实验

#### 中文简介:

本课程定位为野外环境监测操作实习, 培养学生进行环境化学问题研究的思路和方法, 理解和掌握环境污染的产生、变化过程的监测、分析手段和数据分析方法, 加深对环境科学研究和环境保护的认识, 提高学生分析问题和解决问题的能力。

本课程设计大气化学与气候监测和水土生环境交互监测两大板块的实践内容, 涵盖大气、水体、土壤和生物环境等环境参数的变迁研究, 涉及区域背景大气环境质量研究原理及手段、仪器操作、数据分析, 植被生态及天然源VOCs的排放研究原理及手段、仪器操作、数据分析, 湖泊水质参数检测原理及手段、仪器操作、数据分析, 土壤环境参数检测原理及手段、仪器操作、数据分析, 湖泊生态变迁机制及过程研究。

本课程以北京大学塞罕坝环境与生态实习基地为中心, 对周边的湖泊、林地、草原等开展广泛的环境研究、监测、采样活动。

通过本课程的学习力图培养学生可持续发展的环境保护理念, 加强环境参数的监测技术实地操作能力培训, 培养科研能力, 增强和加深对于环境科学与工程学科的学习兴趣, 培养学生理论联系实际的能力, 引导学生正确的研究思路, 学习规范性实习报告的编写能力。

**英文简介 (Course Description):**

The course focuses on the outdoor environmental monitoring operation practice. In this course the undergraduates are cultivated in the ideas and methods of the study on environmental chemical problems. They could understand and grasp the monitoring, analysis and data analysis methods of the pollutants and the changing process during the environmental pollution, so that they could understand deeper environmental science and environmental protection. This course could improve the students' ability to analyze and solve problems.

This course designs the practice of the two plates, atmospheric chemistry and climate monitoring and interaction of soil and water environmental monitoring. The content covers the change of the environment parameters of the atmosphere, water, soil and biological environment. These contents involve the principle and method for study on regional background of atmospheric environmental quality, instrument operation and data analysis, the vegetation ecology and the natural source of VOCs emissions and the study method, instrument operation and data analysis, testing principle and method, water quality parameters of lake, instrument operation and data analysis, the soil environment parameter detection principle and the method, instrument operation and data analysis, research on lake ecological change mechanism and process.

This course carried out around Peking University Saihanba Environmental and Ecological Practice Base. The extensive environmental research, monitoring, sampling activities will be hold around the lake, forestland and grassland. Through the study of this course it is to cultivate students' concept of sustainable development of environmental protection, strengthen their environmental parameters monitoring technology field operating skills, train their scientific research ability, enhance and deepen their environmental science and engineering discipline study interest, cultivate students' ability to integrate theory with practice, and guide the student to correct research thought and normative writing skills of study practice report.

-End-

**课程号 (Course Number):** 18730010

**课程名称 (Course Title):** 社会调查实务/Social Surveys Practices

**开课院系 (School/Department):** 中国社会科学调查中心

**学分 (Credits):** 2

**授课教师 (Faculty):** 丁华, 孙妍, 吴琼, 陈欣欣, 吕萍

**先修课程 (Prerequisites):** 《社会调查方法》

**中文简介:**

本门课程系统讲授社会调查的问卷设计、计算机辅助调查方法、调查执行流程、质量控制、数

据库的建立与清理、抽样设计和权数计算的理论方法及其评估。本课程用一些调查案例展示如何进行科学严谨的社会调查，并通过实际调查中的各个环节对获取高质量的社会调查质量的重要性。

**英文简介 (Course Description):**

This course teaches theoretical methods and their evaluation of survey questionnaire design, computer assisted interviewing methods, the processes of survey, quality control, build and clean-up the database, sample design and weighting adjustment by theoretical methods and their evaluation of the database. This course uses some practical investigation cases to show how to do a scientific survey and then illustrate the importance of all survey aspects in ensuring the high quality survey data.

-End-

**课程号 (Course Number):** 18730020

**课程名称 (Course Title):** 社会调查数据分析方法/The Analysis Methods of Social Survey Data

**开课院系 (School/Department):** 中国社会科学调查中心

**学分 (Credits):** 2

**授课教师 (Faculty):** 顾佳峰, 吴琼, 孔涛, 陈欣欣, 任强, 任莉颖(校外)

**先修课程 (Prerequisites):** 要求有一定定量分析能力

**中文简介:**

课程从常见的统计分析方法使用的误区入手，在讲授对于社会调查数据的各类统计分析方法的正确应用环境和条件之后，着重复杂抽样设计下的回归分析方法，常见的分类数据的分析方法、工具变量的使用，以及体现交叉学科特点的空间计量分析方法。每天上午以讲课为主。下午则依据需要安排参与实践。从使用常见的统计软件进行数据整理入手，带领学员们运用实际数据进行软件操作，从而加深对授课内容的掌握，提高学员们的实际灵活运用能力。

**英文简介 (Course Description):**

The course begins from the common mistakes of statistical analysis and teachers students the proper application of regression analysis under different environment and conditions. Students will learn how to classify data, how to use instrumental variables and gain a better understanding of the use of capabilities of spatial analysis. Lectures are arranged in the morning and action learning is arranged in the afternoon. Students come learn from this course about the use of common statistical software and practice software operations with real data, which can improve students' practical and flexible skills.

-End-

**课程号 (Course Number):** 20133003

**课程名称 (Course Title):** 英国研究/British Studies

**开课院系 (School/Department):** 汇丰商学院

**学分 (Credits):** 3

**授课教师 (Faculty):** 刘苟佳

**先修课程 (Prerequisites):** 无

### **中文简介:**

该课程为汇丰商学院在北大汇丰英国校区开设的本科生暑期课程，目的是通过几周的课程和访学交流，让学生全面了解英国的政治与公共政策、经济金融沿革和现状、历史文化、公共政策、法律以及外交关系等。具体课程内容包括了以下几个专题：英国历史和现状，英国的法律体系，英国媒体与国际关系，英国金融区块链、数字经济等新经济业态发展、英国在国际金融体系中的重要作用，英国的碳中和、绿色经济以及英国与欧盟的关系等话题。

课程通过互动、参与、体验、深度介入的沉浸式教学方式，在课堂讲授的同时安排了学生的分组讨论、案例研讨，同时安排了学生在当地相关机构和企业的参访交流，也会组织学生前往剑桥大学和牛津大学体验英国的高等教育氛围。

该课程包括课堂讲授，案例介绍，小组讨论，实地考察，关键主题辩论以及研讨。通过本课程的学习，学生可提高独立思考能力和逻辑分析能力，学生通过全面学习深入地了解英国的历史与发展，有助于学生未来促进中国和英国、世界之间的国际交流与合作，具备国际化的视野，熟悉更广泛的国际政治、经济、法律、传播、文化知识，学习基本的跨文化管理理念。

### **英文简介 (Course Description):**

This course is a summer course for undergraduates offered by HSBC Business School at Peking University HSBC UK Campus. The purpose is to give students a comprehensive understanding of British politics and public policy, economic and financial history and current situation, history and culture, Public policy, law, and foreign relations. The specific course content includes the following topics: British history and current situation, British legal system, British media and international relations, British financial blockchain, digital economy and other new economic formats, the important role of the British in the international financial system, topics include carbon neutrality in the UK, the green economy, and the UK's relationship with the EU.

Through the immersion teaching method of interaction, participation, experience, and deep intervention, the course arranges group discussions and case studies for students while teaching in the classroom. At the same time, it arranges students to visit relevant local institutions and enterprises and travel to Cambridge University and Oxford University to experience British higher education.

The course includes classroom lectures, case presentations, group discussions, field trips, debates on key topics, and seminars. Through the study of this course, students' independent thinking and logical analysis skills will be improved. Students will have a deeper understanding of British history through comprehensive

learning, which will help students to promote international exchanges and cooperation between China, the UK and the world in the future, gain an international perspective, be familiar with a wider range of international political and economic knowledge, and learn basic cross-cultural management concepts.

-End-

**课程号 (Course Number):** 21100013

**课程名称 (Course Title):** 水资源稀缺经济和政策分析/Economy of Water Scarcity and Policy Analysis

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 王金霞

**先修课程 (Prerequisites):** 无

#### **中文简介:**

你知道吗？作为地球万物生命之源和人类社会发展的基本物质条件之一的水资源正在面临着日益严峻的短缺危机；水资源危机已经从区域性的矛盾逐渐演变为全球人类面临的共同挑战。越来越多的证据表明，水资源危机的根本出路在于如何设计和实施有效的水资源管理制度和政策手段；实现水资源从供给管理到需求管理策略的转变。这也意味着资源经济学家必须在解决水资源危机中承担起更大的历史责任。

那从，从资源经济学的视角如何来理解水资源危机的现状与未来？水资源管理制度是如何演变的？什么样的水资源管理制度更有效？水资源的经济价值如何衡量？水价政策和水权制度等以市场激励为主的政策工具能否在解决水资源危机中发挥应有的作用？节水技术真得实现节水目标了吗？被决策者给与高度关注的跨流域或跨地区的调水工程效果如何？虚拟水贸易能否作为缓解水危机、保障国家粮食安全的重要策略？

针对这些问题，本课程将基于资源经济学的理论和方法并结合实际案例加以深入系统地定性与定量解析。本课程旨在丰富学生在资源经济尤其是水资源经济方面的主要理论知识和分析方法，了解该领域的研究进展，学会运用经济学的思维方式和分析方法来理解和解释现实生活中遇到的主要水资源问题，提高学生对水资源危机的现状、未来及可能解决方案的认知水平；提高学生运用经济学思维方式和分析方法来研究水资源等自然资源问题的能力及学习兴趣。

#### **英文简介 (Course Description):**

Do you know? As the source of life and essential material conditions of development of human society, water has been challenged by increasing serious scarcity. Water scarcity has changed from regional conflict to global challenges. Increasing evidence indicate that the fundamental solution of resolving water scarcity is to design and implement effective water management institution and policy instruments; and realize the transform from supply management to demand management strategies. This implies that resource economics should bear more

important historical responsibility of resolving water scarcity. Therefore, how to understand the current situation and future trend of water scarcity from the opinion of economics? How the institution of water management has evolved? What kind of water management institution is more effective? How to measure the economic value of water resources? Whether incentive policies (such as water policy and water rights institution) can play significant role on resolving water scarcity? Whether water saving technologies has realized the purpose of real water saving? Water transfer projects between river basins or regions have been highly emphasized by policy makers. However, how about the effectiveness of the water transfer projects? Whether virtual water trade can be treated as important strategies on resolving water scarcity and ensuring food security? Focusing on these issues and based on the theories and methodologies of resource economics, this course will conduct systematic qualitative and quantitative analysis on practical cases. This course aims to enrich students' theoretical knowledge and analytical approaches in resource economics (particularly water economics); understand the major frontier research progresses; learn how to use economic logic thinking and analysis approaches to understand and interpret major water problems; enhance students' understanding on the current situation and future trend of water scarcity, and their capacity on using economic method to analyze the problems of water and other natural resources and their learning interest.

-End-

**课程号 (Course Number):** 21130001

**课程名称 (Course Title):** 植物发育及分子生物学/Plant Development and Molecular Biology

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 邓兴旺, 林辰涛(校外), 乔红(校外), 赵云德(校外), Dong Juan(校外)

**先修课程 (Prerequisites):** 无先修课程

#### 中文简介:

授课内容紧扣当今植物科学基础理论与应用领域内前沿与热点, 详细介绍植物发育生物学和分子生物学的基本概念, 以及各领域的研究工作、最新进展、经验和方法。课程内容包括: 植物细胞极性和形态建成的信号转导机制; 植物干细胞分化和调控的分子机制; 植物生长发育信号的表现遗传机制; 植物基因组分析在植物发育研究中的运用; 植物光形态建成及光信号分子转导途径。

#### 英文简介 (Course Description):

This summer course focuses on the basic concepts and research breakthroughs in

plant biology, especially plant development and molecular biology. In addition, the instructors will introduce their own research work and their techniques in relevant fields. The courses will be divided into several parts:

1. Signaling in Cell Development
2. Stem Cell Regulation in Plant Development
3. Epigenetic Mechanisms in Signaling of Plant Development
4. Application of Plant Genome Analysis in the Study of Plant Development
5. Light Regulation of Plant Development

-End-

**课程号 (Course Number):** 21130002

**课程名称 (Course Title):** 植物知道生命的答案/What A Plant Knows:The surprising world of plant senses

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 邓兴旺, Daniel Chamovitz (校外)

**先修课程 (Prerequisites):** 无先修课程

### 中文简介:

走进你不知道的植物世界, 思考生命真实的存在!

捕蝇草是怎样知道闭拢叶子的时机的? 它真的能感觉到昆虫微小、细长的腿吗? 樱花树又是怎样知道何时应该开花的? 它们真的能记住天气吗?

几个世纪以来, 我们不断惊异于植物的多样性和形态。著名生物学家丹尼尔查莫维茨现在将在《植物知道生命的答案》课程中, 对植物如何体验世界给以严谨而引人入胜的讲解, 包括它们所看到的颜色还是它们所遵守的时刻表。

通过着重介绍遗传学等领域的最新研究成果, 丹尼尔查莫维茨将带领我们走进植物的内在世界, 把它们的感觉和人类感觉做对比, 揭示出如下事实我们和向日葵及栎树的共同之处, 比你知道的更多。丹尼尔查莫维茨将在课程中展示植物如何分辨上和下, 如何知道邻近的同类已经遭到了一群饥饿甲虫的侵害, 是否能够欣赏你一直放给它们听的齐柏林飞艇乐队的音乐, 或者是否更偏好于巴赫那旋律优美的连复段。通过对植物触觉、听觉、嗅觉、视觉以至记忆的考察, 促使我们不得不去思考: 植物会不会对周围环境有意识?

《植物知道生命的答案》课程难能可贵地对我们踏过的草丛、我们嗅过的花朵、我们爬过的树木给以深入关注, 让我们能够更好地理解科学和我们在自然界中的位置。

### 英文简介 (Course Description):

For centuries we have collectively marveled at plant diversity and form—from Charles Darwin's early fascination with stems and flowers to modern science fiction. This course intends to present an intriguing and scientifically valid look at how plants themselves experience the world—from the colors they see to the sensations they feel. Highlighting the latest research in genetics and more, we will delve

into the inner lives of plants and draw parallels with the human senses to reveal that we have much more in common with sunflowers and oak trees than we may realize. We'll learn how plants know up from down, how they know when a neighbor has been infested by a group of hungry beetles, and whether they appreciate the music you've been playing for them or if they're just deaf to the sounds around them. We'll explore definitions of memory and consciousness as they relate to plants in asking whether we can say that plants might even be aware of their surroundings. This highly interdisciplinary course meshes historical studies with cutting edge modern research and will be relevant to all students intrigued by nature.

-End-

**课程号 (Course Number):** 21130011

**课程名称 (Course Title):** 经济学视角下的资源环境热点问题/Hot Topics on Natural resources and the Environment from economics perspectives

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 侯玲玲

**先修课程 (Prerequisites):** 无

#### 中文简介:

从“沙尘暴”到“PM2.5”，从“水污染”到“水资源短缺”，从“荒漠化”到“土壤重金属污染”，从“濒危野生动物”到“生物入侵”，从“湿地面积不断减少”到“全球气候变化”，这些都是我们正在经历的资源退化与环境污染问题。

我们能为子孙后代留下多少自然资源？在追求经济发展的同时，如何进行环境保护？经济学在解决资源环境问题上发挥哪些作用？哪些经济学工具可以有效治理环境问题？一只瓢虫值多少钱？排污交易权制度真的有效吗？全球生态系统服务值多少钱？让我们带着这些问题一同走进《经济学视角下的资源环境热点问题》。

本课程主要对资源环境经济学领域的热点问题进行解读，旨在启发学生从经济学的视角理解现实生活中的资源环境问题，掌握治理资源环境问题的主要经济工具。课程素材来自世界各国（尤其是我国）在自然资源保护和环境污染治理方面的案例。

#### 英文简介 (Course Description):

We are suffering from serious resource degradation and environmental pollution at every moment when we are living on the earth, such as sandstorm and PM 2.5, water shortage and pollution, desertification and soil contamination, endangered species and biological invasion, decreasing wetland and global climate change.

How many natural resources can we save for our descendants? How to balance economic development and environmental conservation? What does the role of economics play in solving these natural resource and environmental issues? What are the economic tools in regulating the environment? What is the price of a ladybeetle? Is tradable permit effective in reducing pollution? How much is global ecosystem service? Let's respond to all these issues in our course!

This course will provide deep explanation for the major hot topics in resource and environment area from economics perspective. The goal is to inspire the students to apply economics in solving the issues in resource and environment surround us. The course materials include both basic economic logics and classical cases from all over the world.

-End-

**课程号 (Course Number):** 21130013

**课程名称 (Course Title):** 经济学模型CGE的基本原理及优化软件GAMS编程/Principles of CGE model and Programming

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 解伟

**先修课程 (Prerequisites):** 无

#### 中文简介:

实证模型与定量分析已成为应用经济学与公共管理学研究的重要手段。“拍脑袋”、定性分析已经无法满足经济政策分析的需求。如政府要降低出口退税率，以便减少贸易顺差。到底退税率要减少多少？对就业有什么影响？对相关的不同产业，如服装、农业各有什么影响？

可计算一般均衡模型 (Computable General Equilibrium Model, CGE) 是一种最新发展起来的经济定量模型，它可以应用于许多研究领域 (贸易、财政、环境等)，并能给出实际的政策建议。它的特点是考虑到国民经济各个部分密切相关，牵一发而动全身，不仅对直接影响的部门做定量分析，而且考虑各个部门之间的相互依存和关联关系。本课程由浅入深，循序渐进，从模型需要的数据基础投入产出表讲起，讲解经济学的一些基本函数 (生产、消费、投资、政府和贸易) 和一般均衡理论；适时介绍相关的经济学理论，结合实例、练习和编程，将CGE标准模型的基本原理和结构讲清讲透；以掌握标准的CGE模型为基本目标，讲解CGE模型的基本原理。课程实例全部采用运筹优化软件GAMS语言编程，主要用于经济学基本函数的优化求解和CGE模型求解，也会探讨如何用于其他优化求解问题。

本课程既介绍CGE模型中的经济学原理，又与大家一起动手进行GAMS编程，使学生不但能掌握从理论出发针对问题建造和设计CGE模型，同时也能编写相应的GAMS程序来用计算机模拟CGE模型。

**英文简介 (Course Description):**

Empirical models and quantitative analysis have become important tools for applied economics and public administration. Meanwhile, “subjective decision making” through qualitative analysis no longer can satisfy the requirements of economic policy analysis. For example, in order to abate the trade balance, how much export subsidies should be lowered? How will this affect the labor market? How will this affect other relevant sectors like textile and agriculture?

Computable General Equilibrium (CGE) Model is the latest quantitative tool developed in economics area. It can be used in multiple research areas (trade, tax, environment etc.) to provide practical policy suggestions. One of its special features is that it not only can perform quantitative analysis of the direct affected industrial sectors, but it can simulated the whole economic impact by considering the interdependence of all the sectors of the economy. This course is designed to take you step-by-step from basics of CGE model to a higher level (a standard CGE model). The course starts with Input-Output tables and later explains the functional relationships (production, consumption, investment, government and trade) in economic system and ends with general equilibrium theory and standard CGE model. The course will be mixed with relevant economic theory, practical examples and programming. The CGE model will use the optimization software “GAMS” for explaining the practical examples. In our course, GAMS will mainly be used for optimizing the CGE model, but it will also used to solve other optimization examples to expand your knowledge.

In this course, students will not only master how to confront a problem from theoretical side by constructing a CGE model but will also learn how to compile GAMS routines to solve optimization problems in CGE and other models.

-End-

**课程号 (Course Number):** 21130015

**课程名称 (Course Title):** 管理经济学基础/Economic Principal for Management

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** SHENGYU

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程旨在帮助非经济学专业的本科生、研究生、工商管理硕士 (MBA) 和金融专硕等系统的了解有关经济学和管理学背后的基本理论和方法, 学会以批判的思维分析企业经营管理所处的微观和宏观经济环境, 并掌握经济学中的量化分析方法评估市场环境和开放经济条件下的企业管

理方法。

本课程包括两个主要部分：第一部分主要讨论消费者行为、市场需求和消费者剩余、生产和成本理论、市场结构与均衡、企业定价策略、博弈论与信息经济学和一般均衡理论。第二部分主要讨论经济增长理论、国民收入核算体系、货币与银行学基础、通货膨胀与失业、财政和货币政策以及开放的国际经济。

**英文简介 (Course Description):**

This course is designed for undergraduates and graduates with no economic background, and provide the basic knowledge on the principles of economics and management. The purpose is to help students to 1) learn the economic theories and methods in a systematic way; 2) analyze macro-economic and micro-economic market environments from a critical perspective; 3) capable of using the qualitative and quantitative approaches in practice.

The course contains two parts: the first part covers: consumption behavior, market demand and surplus, production and cost theory, market equilibrium and market structure, price strategy, game theory and information economics, and general equilibrium theory; the second part covers: economic growth theory, national accounts, monetary and banking principles, inflation and unemployment, fiscal and monetary policies and open economics.

-End-

**课程号 (Course Number):** 21130016

**课程名称 (Course Title):** 食品安全：政治经济学和心理学研究/Food Security: Political Economics and Psychology

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 王晓兵

**先修课程 (Prerequisites):** 无

**中文简介:**

食物在中国始终是一个古老而年轻的话题。农业经济思想可以追溯到远古时代，我国春秋时期，孔子和孟子的著作中已有诸多关于农业制度与政治、安定民生的论述。“哥伦布大交换”、人口增长和迁移奠定了现代文明的基石。上世纪曾发生的数次大饥荒，仍给不少人保留下深刻的饥饿记忆。在食物贸易和全球食物价值链供给背景下，我们的膳食偏好和食物消费也正悄然发生变化，引发现代人对肥胖和健康的思考。心理学的交叉研究帮助我们识别食物消费决策机理，引导着理性食物消费。食品安全与消费也需关注食物浪费、环境与能源的可持续性。本课程将从理解全球、国家和家庭等不同尺度的食品安全讲起，在回忆历史上次大饥荒事件的基础上，梳理全球食品安全的演变过程。运用经济学和心理学的交叉研究理解食物消费中的差异化行为。最后本课程还将探讨现代农业中的食物浪费、环境与能源问题如何影响我们未来的食品安全与

消费。选修《食物安全：政治经济学与心理学》，关注食物安全与消费。

**英文简介 (Course Description):**

Food security has always been debated burningly since the taste of herbs by Shennong which created the era of “slash and fire” and the publication of the agronomy encyclopedia. The thoughts of agricultural economy can be traced back to the ancient times. Confucius and Mencius had many expositions on agricultural operation, institutions and the livelihood. “Columbian exchange”, population growth and migration laid the cornerstone of modern civilization. Many people still deeply remember the hunger due to several famine events in the last century. In the context of food trade and the value chains of global food supply, our dietary preferences and food consumption are also changing. These trigger the deep thinking about obesity and health. Interdisciplinary studies in psychology help us identify food consumption decision mechanisms, and then the results will guide rational food consumption. Food safety and consumption should also focus on food waste, environmental and energy sustainability. This lecture presents the definition of food security from global, national and households’ dimensions. After studying the several famines in history internationally and nationally, we analyze the evolution of global and China’s food security policy. Using the Interdisciplinary studies between economics and psychology, we will better understand the differential behavior in food consumption. Finally, this lecture will also explore how food waste, environmental and energy issues in modern agriculture, which influence our future food safety and consumption. This lecture motivates the students focusing on “Food security and consumption” Welcome to “Food Security: Political Economics and Psychology” !

-End-

**课程号 (Course Number):** 21130017

**课程名称 (Course Title):** 发展经济学及其在中国的实践/Development Economics and Its Practice in China

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 刘承芳

**先修课程 (Prerequisites):** 无。

**中文简介:**

改革开放40年我国贫困人口减少了近7亿，对全球贫困人口数量减少的贡献超过90%。但截至2018年底我国仍有1660多万农村贫困人口。为何我国能取得如此巨大的减贫成就？新形势下如何实现脱贫攻坚目标？如何理解我国收入差距的变化？如何成功跨越中等收入陷阱，促进经济社会转型？

针对这些问题，本课程将首先介绍发展经济学基本理论，然后从自然区位环境、人口和家庭婚育行为、劳动力就业和迁徙、农村公共物品提供和人力资本培育等角度回顾我国的发展历程，总结发展经验，剖析进一步发展面临的挑战。最后本课程将通过分享授课教师多年来开展的大量试验研究，与大家共同探索如何通过提升人力资本助力我国成功跨越中等收入陷阱。

本课程旨在丰富学生在发展经济学方面的基本理论知识和实证分析方法，了解该领域的学科进展，脚踏实地的感受中国农村减贫和发展的脉搏。

#### **英文简介 (Course Description):**

This course will cover topics in development economics through the lens of China's experience. Although the main goal will be for students to gain an understanding of concepts in development economics, the course will cover these concepts with a focus on how they relate to the institutional changes and economic policies and that have shaped China's economic emergence as well as the country's current development challenges. Development economics is a broad field and impossible to be comprehensively cover within 32 hours. As such, this course will be a survey of select topics most relevant to China. We will also cover some basic statistical measurement issues and impact evaluation methods important for understanding modern research in development economics. Materials will be covered at the undergraduate level. All lectures and discussions will be conducted in English.

-End-

**课程号 (Course Number):** 21130018

**课程名称 (Course Title):** 植物大迁徙/The Great Plant Migrations

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 周岳

**先修课程 (Prerequisites):** 无

#### **中文简介:**

我们的衣食住行都离不开植物，可是你知道植物也是漂洋过海大“迁徙”才到达世界各地吗？为什么法国经济学家法布尔说“国王的私生子都能在历史上留名，而小麦的源头却无人知晓”？你知道伴随着植物“迁徙”，人类的经济和社会活动都产生了什么巨大变化吗？反之，人类经济的发展又会对植物生长和迁徙产生怎样的影响？千万年来，植物的根、茎、叶、花、果实、种子提供着人类所需的全部七大营养素：水、蛋白质、油脂、碳水化合物、维生素、矿物质、和膳食纤维，可是你知道它们本来的样子吗？吃米的南方人跟吃面的北方人会有不同的性格吗？本课程从介绍植物的驯化以及“迁徙”角度出发，不但让学生了解植物的生理和发育，关注隐藏的分子调控机理，而且还可以结合农业经济的基本知识，帮助人们认识植物“迁徙”和人类经济社会发展的互动关系。溯本求源，热爱植物和农业经济碰撞的你，欢迎选修《植物大迁

徙》!

**英文简介 (Course Description):**

Humans couldn't exist without plants, but do you know how plants travel everywhere in the world? French economist Jean Henri Fabre said that it knows the names of the king's bastards but cannot tell us the origin of wheat. What does this mean? How has the Great "Plant Migrations" changed the social economics activities and vice versa? For thousands of years, roots, stems, leaves, flowers, fruits, and seeds of the plants have provided all seven nutrients the human body needs: water, proteins, lipids, carbohydrates, vitamins, minerals, and dietary fibers. But do you know how plants look like before we domesticated them? This course aims to present the plants domestication and "migrations". Students will not only learn the plant physiology, development and the underlying molecular mechanisms, but also learn the agricultural economics to understand the changes caused by plant "migrations". If you are the person who is seeking the unknown and loving the combination of plants and economics, welcome to "The Great Plant Migrations"!

-End-

**课程号 (Course Number):** 21130019

**课程名称 (Course Title):** 计量经济学因果识别方法详解/An Introduction to Causality Identification Methods

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 黄开兴

**先修课程 (Prerequisites):** 高等数学, 经济学原理, 初级计量经济学

**中文简介:**

断点回归 (RDD)、双重差分 (DID) 和工具变量法 (IV) 是经济学研究中最常用的因果识别方法。掌握这些方法的基本运用并不难, 难的是如何在自己的研究中准确的运用这些方法。这是由于每一类方法都有众多延伸, 例如, DID家族中的常用方法就有二期DID、多期DID、处理时间差异DID、处理强度差异DID、IV-DID、PSM-DID、RD-DID、Synthesized-DID、Event Study等等。由于每种方法的适用情景和假设各有差异, 当研究者面对一份特异的 研究数据时, 恰当选择和运用因果识别模型就成了一个重大挑战。因果识别模型的错误运用已经成为研究论文被拒稿的最主要原因之一。

本课程基于对大量实证文章的系统总结, 对RDD、DID、IV这3大因果识别方法进行系统介绍。有别于传统的因果识别课程, 本课程并不是对因果识别方法的全面概述, 而是从实践的角度, 针对3类最常用的因果识别方法进行深入剖析。本课程的教学过程将涉及上百篇实证论文。通过对这些论文的系统总结、归纳和对比, 学生将掌握每个因果识别方法的假设、运用情景和注意事项, 使熟练运用这些方法成为可能。

**英文简介 (Course Description):**

The Regression Discontinuity Design (RDD), Difference-in-Differences model (DID), and Instrumental Variable methods (IV) are the most commonly used causal identification methods in economics research. It is not difficult to master the basic application of these methods, but the difficulty is how to accurately use these methods in your own research. This is due to the fact that each type of method has many extensions. For example, the commonly used methods in the DID family include two-phase DID, multi-phase DID, time-varying DID, intensity-varying DID, IV-DID, PSM-DID, RD-DID, Synthesized-DID, Event Study, etc. Since the applicable scenarios and assumptions of each method are different, when researchers are faced with a specific research data, it becomes a major challenge to properly select and use a causal identification model. Misuse of causal identification models has become one of the top reasons for rejection of research papers.

Based on a systematic summary of a large number of empirical articles, this course will systematically introduce the three causal identification methods of RDD, DID, and IV. Different from traditional causal identification courses, this course is not a comprehensive overview of causal identification methods, but an in-depth analysis of the three most commonly used causal identification methods from a practical point of view. The teaching process of this course will involve hundreds of empirical papers. Through the systematic summary, induction and comparison of these papers, students will master the assumptions, application scenarios and precautions of each causal identification method, making it possible to use these methods proficiently.

-End-

**课程号 (Course Number):** 21130020

**课程名称 (Course Title):** 数字技术与经济发展 文献导读和案例讨论/Digital Technology and Economic Development: Literature and Cases

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 王悦

**先修课程 (Prerequisites):** 无先修要求

**中文简介:**

从电报、手机、到互联网电商，ICT技术的更新换代给商品市场、生产者和消费者带来了哪些变化？这其中有什么相通的经济学原理？社交媒体对于人们的福利产生什么影响？它造成了观点的两级分化吗？数字技术革新与农业生产会产生什么样的碰撞？手机会成本新农具吗？如何从经济学角度理解人工智能辅助决策与人类互动的？这对劳动力市场的意义与传统的机械自动化有什么不同？ChatGPT为代表的大模型可能预示着通用人工智能时代的到来。它会解决哪些问题，

又带来哪些挑战？

本课程讨论数字技术在经济发展中发挥的作用。我们将通过文献导读带领同学们从经济学角度思考上述问题，并结合案例的讨论启发同学们思考正在经历的技术变革可能带来哪些经济影响。

**英文简介 (Course Description):**

From telegraph, mobile phone, to e-commerce, what changes have ICT technology updates brought to commodity market, producers and consumers? What are the common economic principles in this? What impact does social media have on people's welfare? Does it cause a polarization of opinions? Will digital technology innovation change agricultural production? Will mobile phones become new farming tools? How to understand the interaction between artificial intelligence assisted decision-making and human beings from an economic perspective? What does this mean for the labor market and how is it different from traditional mechanical automation? ChatGPT as a representative of large models may herald the arrival of the era of general artificial intelligence. What problems will it solve and what challenges will it bring? This course discusses the role of digital technology in economic development. We will lead students to think about these questions from an economic perspective through literature reading. We will also inspire students to think about what economic impacts may be brought by the technological changes they are experiencing through case discussions.

-End-

**课程号 (Course Number):** 21130021

**课程名称 (Course Title):** 免疫检测/Immunoassay method

**开课院系 (School/Department):** 现代农学院/Peking University School of Advanced Agricultural Sciences

**学分 (Credits):** 2

**授课教师 (Faculty):** 张改平, 张意锋

**先修课程 (Prerequisites):** 无

**中文简介:**

免疫检测技术是基于抗体抗原反应的原理对待测物进行定量定性分析的检测方法，具有特异性强、灵敏度高、简便等优点，是现代生命科学的重要研究手段，在生物分析检测领域有着广泛的应用前景。本课程综述了近几年来出现的免疫检测技术的新方法，简要介绍了它们的原理、特点及其应用，并做出相应的比较。

**英文简介 (Course Description):**

Immunoassay technology is a quantitative and qualitative analysis method based on the principle of antibody-antigen reaction. It has the advantages of strong specificity, high sensitivity and simplicity. It is an important research means of

modern life science and has a wide application prospect in the field of biological analysis and detection. This course reviews the new methods of immunoassay in recent years, briefly introduces their principles, characteristics and applications, and makes corresponding comparisons.

-End-

**课程号 (Course Number):** 23200016

**课程名称 (Course Title):** “材料+” 科创讲堂 / “Materials+” Innovation and Entrepreneurship Lecture

**开课院系 (School/Department):** 材料科学与工程学院 / School of Materials Science and Engineering

**学分 (Credits):** 1

**授课教师 (Faculty):** 林立

**先修课程 (Prerequisites):** 无

**中文简介:**

为服务国家战略需求，瞄准前沿工程科技领域，推动工程科学技术创新和战略管理创新，加快培养国家亟需的工程科技领军人才，学院将设置材料工程实践课程。材料学院指派专人负责学员选拔和授课组织工作，合作企业提供产业资源。学院将出面聘请知名企业家及其团队、海内外具有丰富产业化经验的顶尖学者组成师资团队。课程旨在引导学生在科技大变革的背景下，思考加速技术转移转化、实现社会经济价值的原理与方法。具体将采用“学术报告、课程讲授、圆桌论坛与模拟路演、企业实践”等四种方式进行。

**英文简介 (Course Description):**

Focusing on the advances of materials science, the School of Material Science and Engineering will set up the course of Material innovative practice to promote the strategic management innovation of engineering science and technology and cultivate leading talents in engineering science and technology urgently needed by the country. The School of Material Science and Engineering would assign special personnel to be responsible for student selection and teaching organization, and cooperative enterprises would provide industrial resources. The college will hire well-known entrepreneurs and their teams, and top scholars with rich industrialization experience at home and abroad to form a teaching team. The course aims to guide students to think about the principles and methods of accelerating technology transfer, and realizing social and economic value, under the background of great technological change. Specifically, the course will be carried out in four ways: “academic reports, course lectures, round table forums and simulated roadshows, and corporate practice”.

-End-

**课程号 (Course Number):** 30340009

**课程名称 (Course Title):** 中国民俗与文化/Chinese Folklore and Culture

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 王娟

**先修课程 (Prerequisites):** There is no prerequisite for this course.

**中文简介:**

本课程主要从神话、民俗、节日、传统食物、民间艺术以及建筑等方面介绍中国人文。课程将重点介绍历史、安全、神圣、家族、神、秩序等中国文化的关键方面。

**英文简介 (Course Description):**

The purpose of this course is to introduce the Chinese people and their culture from the perspectives of myths, folktales, festivals, traditional food, folk arts and architectures, and so on. Within these topics, we will focus especially on some of the key themes of Chinese culture such as history, safety, sacredness, family, gods, order, and so on.

-End-

**课程号 (Course Number):** 30340059

**课程名称 (Course Title):** 中国古典诗词/Classical Chinese Poetry

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 梅申友

**先修课程 (Prerequisites):** Some basic knowledge of Chinese is preferable, but not mandatory.

**中文简介:**

本课程为英文授课。

**英文简介 (Course Description):**

As a time-honored genre, poetry enjoyed an unrivalled status in classical Chinese literature. This course offers a survey of classical Chinese poetry by studying its evolution from about the 11th century B.C to the 12th century AD, when poetry had almost passed the zenith of its development. We shall study its two major forms — Shi poetry & Ci poetry (song lyrics) — and examine their various modes by focusing on the most representative works in history, particularly by ten major poets (Qu Yuan, Cao Zhi, Tao Qian, Wang Wei, Li Bai, Du Fu, Bai Juyi, Li Yu, Su Shi and Li Qingzhao) with due attention to their distinctive life experience and the

cultural context of each poem. By the end of the term, students will be enabled to cultivate their capacity for independent appreciation and to catch a glimpse of the breadth, depth and wealth of classical Chinese poetry.

This is a lecture/seminar-combined class. On class days, when a new genre or poet is being introduced, I will introduce at the very beginning some relevant historical and cultural background information, followed by students; discussion. Generally, we focus on one genre/poet for each session. All the study materials will be in English. I shall find the best translations available, sometimes along with the Chinese original and relevant audio readings. We shall also read some poems by non-Chinese poets, such as Shakespeare, Donne, Milton, Marvell, Blake, Wordsworth, Coleridge, Byron, Shelley, Tennyson, Browning, Christian Rossetti, Hardy, Edward Thomas, Wilfred Owen, Yeats; Anne Bradstreet, Poe, Dickinson, Frost, Stevens, Edna St Vincent Millay, Bishop; Baudelaire, Milosz and Szymborska, etc. We believe such comparative lens will lead us to see better both the merits and the weaknesses of Chinese poetry. Students are required to read the assignments (including poems and essays) in advance and come to class fully prepared for discussion.

-End-

**课程号 (Course Number):** 30340076

**课程名称 (Course Title):** 中国现当代小说与电影/Modern Chinese Fiction through Film

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 马乃强

**先修课程 (Prerequisites):** The target audience are the international students with various national backgrounds, and the students are supposed to have much interest in modern Chinese fiction and film. The course will be instructed in English, and there are no other pre-requisites for this course.

#### **中文简介:**

当前的跨文化教学要求多媒体既是教学手段，又是教学内容。本课程结合小说和电影两种文本，通过文学和多媒体双重艺术形式进行中国文学文化教学。现当代中国文学始于20世纪初期，课程选用现当代中国文学史上的经典短篇、中篇和长篇小说及其改编的电影。本课程教学包括文学背景知识，作家作品介绍，小说文本分析和评论，课后问题讨论和问答，电影改编和赏析等。借助现代多媒体教学手段，本课程致力于提高学生独立思考水平，增强其文化意识、文学修养和信息时代的双重文本读写能力，从而达到我们跨文化教学的最终目的。

#### **英文简介 (Course Description):**

The current cross-cultural teaching requires both teaching with and teaching about

multimedia. This course integrates the printed text (fiction) and media text (film), teaching Chinese culture through literature and multimedia. The modern Chinese literature starts from the early 1900s, and the course will cover about ten classical short stories, novellas, and novels of modern China as well as the movies adapted from these literary works. The course instruction mainly includes the knowledge of literary background, introduction of authors and their writings, analysis and comment of fictional works, questions and answers of discussion topics, and comparison and appreciation of adapted films. With the help of literary comprehension and multimedia appreciation, the course aims to improve students' intellectual independence, and hence enhance their cultural awareness, literary education and contemporary school literacy.

-End-

**课程号 (Course Number):** 30340082

**课程名称 (Course Title):** “中国崛起”专题研讨课/The Rise of China and Change in World Politics

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 徐昕(校外)

**先修课程 (Prerequisites):**

**中文简介:**

本课程为中文授课。

**英文简介 (Course Description):**

The rise of China is one of the most important and defining themes in contemporary international relations. This seminar course is intended for advanced undergraduate students to examine major issues and topics concerning the rise of China from a broad theoretical perspective, and to engage in the academic discourse and policy debate about implications of China's rise for world politics. The seminar is organized around the central question – will China's rise bring about a fundamental change to the international system? – and roughly divided into three sections: (1) China's rise and the “paradigm change” in world politics; (2) China's quest for identity and order; and (3) implications of China rising for Asia and the world. Under each of these sections, a few specific topics are identified for class discussion.

Students wishing to enroll in this course are expected to have basic knowledge of international relations and China's foreign policy.

-End-

**课程号 (Course Number):** 30340094

**课程名称 (Course Title):** 中国改革与世界经济/China in the Global Economy

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 陈绍锋

**先修课程 (Prerequisites):**

**中文简介:**

本课程为英文授课。

**英文简介 (Course Description):**

- a. To understand the roadmap of Chinese reform and the logic behind it;
- b. To understand the uniqueness of China's transition and its economic implications;
- c. To learn how China interacts with the world;
- d. To build the capability of studying Chinese economy.
- e. Upon completing this course, students are expected to get familiar with China model, China's economic interaction with the outside world, challenges the Chinese economy is facing, as well as the world economic system.

-End-

**课程号 (Course Number):** 30340095

**课程名称 (Course Title):** 中国经济导论/Introduction to Chinese Economy

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** 季曦

**先修课程 (Prerequisites):** A university-level introductory course in Economics (e.g. Principles of Economics).

**中文简介:**

本课程为英文授课。

**英文简介 (Course Description):**

China's fast economic growth has generated great interest among media, scholars and ordinary people around the world. The aim of this course is to provide students with an overview of the Chinese economy and the detailed understanding of China's economic transition. The topics covered include an introduction of the Chinese economic history, its market oriented transitional process and its implications on

economic growth, the urban-rural divide and the reforms of the two sectors, population policy and the related labor market issues, poverty and inequality, fiscal and financial reforms, international trade and foreign investment, etc. Upon completion of the course, students are expected to be familiar with China's economic system, its current economic reforms, and the challenges that the country faces in the twenty-first century.

-End-

**课程号 (Course Number):** 30340095

**课程名称 (Course Title):** 中国经济导论/Introduction to Chinese Economy

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** LIUMINQUAN (刘民权)

**先修课程 (Prerequisites):** A university-level introductory course in Economics (e.g. Principles of Economics).

**中文简介:**

本课程为英文授课。

**英文简介 (Course Description):**

China's fast economic growth has generated great interest among media, scholars and ordinary people around the world. The aim of this course is to provide students with an overview of the Chinese economy and the detailed understanding of China's economic transition. The topics covered include an introduction of the Chinese economic history, its market oriented transitional process and its implications on economic growth, the urban-rural divide and the reforms of the two sectors, population policy and the related labor market issues, poverty and inequality, fiscal and financial reforms, international trade and foreign investment, etc. Upon completion of the course, students are expected to be familiar with China's economic system, its current economic reforms, and the challenges that the country faces in the twenty-first century.

-End-

**课程号 (Course Number):** 30340099

**课程名称 (Course Title):** 全球背景下的视觉传播/Visual Communication for a Global World

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 3

**授课教师 (Faculty):** Laurence Simmons(校外), 刘红中

**先修课程 (Prerequisites):**

**中文简介:**

Course goals

Students will:

Gain an understanding of the physiological and cognitive aspects of seeing.

Learn theories scholars have developed to explain visual communication.

Learn to analyse and critique visual messages.

Develop skills in producing visual messages.

The target audience are undergraduates or graduates, or even professionals, from a wide background with an interest in visual culture and how it is defining our world today. There will be a particular focus on the importance of digital images and how they are both facilitating and challenging our lives.

**英文简介 (Course Description):**

Course goals

Students will:

Gain an understanding of the physiological and cognitive aspects of seeing.

Learn theories scholars have developed to explain visual communication.

Learn to analyse and critique visual messages.

Develop skills in producing visual messages.

The target audience are undergraduates or graduates, or even professionals, from a wide background with an interest in visual culture and how it is defining our world today. There will be a particular focus on the importance of digital images and how they are both facilitating and challenging our lives.

-End-

**课程号 (Course Number):** 30340103

**课程名称 (Course Title):** 《资治通鉴》导读/ZI ZHI TONG JIAN Guide

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 姜鹏(校外)

**先修课程 (Prerequisites):** 无

**中文简介:**

把《资治通鉴》放入时代背景，讨论它的诞生机缘、文本特征及其思想内涵，并进一步探讨历史书写的本质。

**英文简介 (Course Description):**

This course puts ZI ZHI TONG JIAN in the context of its time, discusses its chance of birth, textual features and ideological connotations, and further explores the nature of historical writing.

-End-

**课程号 (Course Number):** E1273913

**课程名称 (Course Title):** 气候变化与可持续发展/Climate Change and Sustainable Development

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 戴瀚程

**先修课程 (Prerequisites):** 英语熟练, 经济学基础。

对气候科学、能源和气候经济与政策感兴趣的本科生和研究生

English proficiency, basic economics.

Undergraduate students and graduate students who are interested in climate science, energy and climate economics and policy

**中文简介:**

越来越多人认识到, 气候变化与可持续发展密不可分, 这不仅是因为在根本上二者具有相同的驱动因素, 在政策选择时还有一定的协同性。精心设计的气候变化减缓政策可以在空气污染控制、能源安全增强和资源效率改进等方面对可持续发展带来很大的共同效益。为了有效地为国家或国际层面的决策提供信息, 科学家必须采取综合和整体的视角。本课程旨在概述最新的气候变化科学共识、气候影响、气候变化适应, 以及气候变化减缓与可持续发展目标 (如高质量经济增长、能源安全、食品安全、空气污染控制和人类健康改善) 之间的关系。此外, 它还将简要介绍如何从系统分析的角度理解和揭示复杂的关系。

**英文简介 (Course Description):**

It is increasingly recognized that climate change is intricately linked to sustainable development, not just in terms of joint underlying drivers, but also with respect to synergistic policy choices. Well-designed climate change mitigation policy can lead to significant co-benefits for sustainable development in air pollution control, energy security enhancement and resource efficiency improvement. To effectively inform decision-making on these issues, whether at the national or international level, science must take an integrated and holistic perspective. The course aims to give an overview of the latest scientific consensus on climate change, climate impacts, climate change adaptation and mitigation, and the nexus between climate change mitigation and sustainable development goals such as high-quality economic growth, energy security, food

security, air pollution control and human health improvement. Furthermore, it will briefly introduce how the complicated nexus could be understood and uncovered from system analysis perspectives.

-End-

**课程号 (Course Number):** 30340107

**课程名称 (Course Title):** 听觉文化与世界文明/Aural Culture and World Civilization

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 毕明辉(校外)

**教师简介 (Faculty Introduction):**

研究方向: 毕明辉, 教授, 博士生导师。复旦大学文艺学博士后, 中央音乐学院西方音乐史博士。曾任北大学工部副部长(挂职)、柏林自由大学孔子学院院长。英国爱丁堡大学音乐学院、美国圣母大学音乐系、新西兰奥塔哥大学音乐学院、台大音乐学研究所等顶尖大学访问学者。北大新西兰研究中心特聘研究员、北大德国研究中心特聘研究员。北京市高等学校青年教学名师, 第七届北京青年教师教学基本功比赛(高校)文科A组一等奖第一名、首都劳动奖章、首届全国高校青年教师教学竞赛文科二等奖、教育部在线教育优秀教师、国家精品在线课程奖等获奖者。

科研成果: 2007年起执教北大艺术学院, 深耕音乐学及音乐交叉学科, 代表研究包括《20世纪西方音乐中的中国因素》、《后现代主义音乐思潮的新动向》、《约翰·凯奇音乐美学思想流变》、《音乐鉴赏》、《电影音乐》、《The Bloomsbury Encyclopedia of Popular Music of the World》(英文辞条撰稿)、《关于谭盾“水乐”与基耶斯洛夫斯基〈蓝〉电影音乐之比较研究》(英文)、《围绕中国乐派议题的显隐叙事》、《理解“中国乐派”: 视角转换与范式建构》(合著)、《是谁弄死了慕课和直播课》等。主持并完成各类各级多主题项目: 高教出版社教改与创新项目: “音乐鉴赏”新教材写作、APP开发、慕课制作、北京大学“教学新思路”项目: 基于微信群组短慕课与在线直播手段相结合的新型音乐通识教学模式实践与研究——以《20世纪西方音乐》为试点、北京大学教改项目: 基于微课设计的课程管理模式、北京大学教改项目: 探索混合教学模式之路北大《音乐与数学》教改实践、北京大学教改项目: 基于混合教学模式与深度教学理念的《西方音乐欣赏》双向度教改实验、北京大学教改项目: 混合课程模式与深度教学理念有效融合的创新研究与实践、北京大学人文学科文库: 中西传统乐教的现代启示、北京大学研究生创新项目: 全球语境下的中国音乐(中英文双语)、北京大学北大海外名家讲学计划、北京大学高端学术讲学计划、北大人文论坛: 中国民族器乐创作与创新当代问题与反思、文化部国家社科重大课题《中国乐派》子课题五《乐派的现状调研与国际比较研究》等。

**先修课程 (Prerequisites):** 无

**中文简介:**

《听觉文化与世界文明》基于任课教师系列北大优秀通识课程(包括《音乐与数学》、《20世纪西方音乐》《西方音乐欣赏》、《中西音乐文化专题》)之长期积累, 顺应学术前沿发展潮流, 深耕音乐跨学科与跨文化所长。课程以现象、音乐、问题、文献、时空为基本切入点, 力图在讲授中回应五大问题: 什么是听觉文化为什么听觉是人、历史、文化的证据为什么听觉是思想、文化、艺术的价值体现和非物质文化遗产为什么听觉的见识影响人的见解听觉文化的演进是如何影

响和构成世界文明的围绕侧重四条线索明暗交叉，启迪学生：1. 听觉现象作为问题的引导与深入；2. 以阅读材料为依据的听觉思想观念史的变迁与批判；3. 音乐作品为核心听觉样本的鉴赏与分析；4. 跨文化理论与实践和课堂音乐会现场体验相结合的互动。课程力求在全球化与本土化双重语境下，对学界长期存在的诸多问题作出理性化且具批判性的反思，以多学科、跨学科、超学科的方式推进新文科理念下音乐实践与研究的发展和完善，培养学生综合知识基础上的独立思辨能力，以世界和中国的双重视角，以音乐历史观和文化观的全面发展为最终目标，体现出课程内容的通识关怀。

#### **英文简介 (Course Description):**

Aural Culture and World Civilization is a new perspective-oriented core Liberal arts course which based on the core principles of phenomena, music, questions, documents, and time & space under the circumstance of Modern/ Post-Modern Age, the instructor, and his group hope that it will give a response to five major questions: What is aural culture? Why is it the witness and awareness of people, history, and culture for the world? Why is it an expression and identification of the values and intangible heritage of ideas, culture, and art? Why does aural insight influence and impact the way of watching and understanding of human beings? How has the evolution of aural culture produced and constructed world civilization? Audiences will be guided with around four strands: 1. The phenomenon of Aural Culture as a question; 2. The changes in the history of ideas under the reading materials; 3. The auditory samples which selected from typical musical pieces as the core presentation; 4. Learning and understanding the lecture along with that of the related Chinese and Western Music and Culture of PKU and lecture concert in live. We are very much seeking to rationalize and critically reflect on many long-standing issues in the academic world in a dual context of globalization and localization, and to promote the development and improvement of music practice and research under the new liberal arts concept in a multidisciplinary, interdisciplinary, and supra-disciplinary manner. The course also be very happy to foster the independent thinking which based on comprehensive knowledge, with the goal of developing a holistic view of music history and culture from both a global and Chinese perspective, reflecting the multiple concerns of the focus of course.

-End-

**课程号 (Course Number):** 30340108

**课程名称 (Course Title):** 伦勃朗与维米尔/The Art of Rembrandt and Vermeer

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 刘晨(校外)

**教师简介 (Faculty Introduction):**

研究方向：刘晨，清华大学建筑学院副教授，博士生导师，新雅书院任课教师；美国盖蒂中心高级研究员，哈佛大学燕京学社特邀研究员，哈佛大学意大利文艺复兴研究中心特邀研究员，普林斯顿大学艺术史哲学博士。

科研成绩：刘晨，笔名秋鹭子。

1998年毕业于清华大学建筑学院，2000年获美国马里兰大学建筑与城市学硕士；2005—2011年于普林斯顿大学艺术与考古系攻读文艺复兴与巴洛克建筑及艺术史，获博士学位。2010—2011年度马克斯·普朗克艺术研究所（罗马）学者。2012—2013年度哈佛大学意大利文艺复兴研究中心（佛罗伦萨）“安德鲁·梅隆学者”。与哈佛中心联合创办专为中国学者订制的文艺复兴研修计划，并担任“意大利文艺复兴建筑与艺术之统一”研修营联席主任。2018—2019年度哈佛燕京学社邀请学者。2018—2020 连续三年获美国学院艺术联盟国际学者研究奖金。2019—2020年度美国盖蒂中心特邀研究员。

现为清华大学建筑学院副教授，博士生导师。自2017年起在新雅书院讲授“意大利文艺复兴艺术”通识课(2020年荣获“清华大学精品课”称号)，深受欢迎。兼任北京电影学院客座教授，全英文讲授视觉艺术史，并在上海同济大学参与讲授“手工艺”国际研究生课程。连续数年为《三联生活周刊》《新知》《爱乐》及Esquire China, T Magazine等刊物撰写书评、访谈、艺术和音乐专栏。出版专著《凝视死亡——另一个文艺复兴》（三联书店2022.10）。

**先修课程 (Prerequisites):** 修过欧洲历史、西方艺术史等相关课程的学生可优先考虑

#### 中文简介:

本课程详细讲述17世纪荷兰两位最著名艺术家的作品，探究他们的创作经历以及该时期的文化、宗教和政治背景，思考这段历史的复杂遗产及其对现代艺术世界的启示。

伦勃朗和维米尔是同时代人，生活在17世纪荷兰极具特色的艺术世界中。他们创作了当时最伟大的画作，而他们的艺术目标、创作过程及方法却截然不同。作为对比和互补的人物，二者代表了那个时代多样的艺术与文化风貌。本课程探讨的主题包括：艺术家个人风格、绘画品类的发展（从历史画到肖像画、风景画和风俗画）、不同地域的艺术流派（阿姆斯特丹与代尔夫特）、伦勃朗和维米尔死后的声誉、艺术家与艺术史的关系等问题。

#### 英文简介 (Course Description):

This course explores in detail the work of the two most famous artists of 17th-century Holland, studying their creative processes as well as the cultural, religious and political context of the period.

Rembrandt van Rijn and Jan Vermeer, contemporaries in the highly distinctive art world of 17th-century Holland, produced some of the greatest paintings of their time, yet their aims and approaches to art were very different. As contrasting and complementary figures, they represent some of the diverse tendencies of the time. This course will study the development of individual styles and subject matter ranging from history painting to portraiture, landscape and genre painting. The distinct artistic character associated with centers of production will be assessed with an emphasis on Amsterdam and Delft. The course will also look at the posthumous reputations of Rembrandt and Vermeer, examining questions of attribution, authenticity, canonicity and rediscovery.

-End-

**课程号 (Course Number):** 30340109

**课程名称 (Course Title):** 欧洲文化：从古典希腊到文艺复兴/European Culture From Classical Greece to the Renaissance

**开课院系 (School/Department):** 教务部

**学分 (Credits):** 2

**授课教师 (Faculty):** 朱孝远

**教师简介 (Faculty Introduction):**

研究方向：欧洲史

科研成绩：朱孝远，北京大学历史学系教授，国家高层次人才特殊支持计划（万人计划）领军人才，国家级教学名师，曾出版《欧洲文艺复兴史政治卷》等著作34部，在《中国社会科学》《新华文摘》《历史研究》《世界历史》、Chinese Studies in History、Chinese Historians、World History Studies、International Journal of Sino-Western Studies等中外专业期刊上发表论文230多篇，其中A类期刊或A&HCI论文多篇，为国际权威索引杂志Historical Abstracts收录。

**先修课程 (Prerequisites):** 无

**中文简介:**

《欧洲文化：从古典希腊到文艺复兴》是在两门教育部国家精品课基础上修改而成，两门精品课分别为2006年教育部评选的国家精品课程《西方文明史导论》和2018年教育部精品课《文艺复兴经典名著选读》。本课程分专题讲授从古典希腊到文艺复兴的欧洲文化的演变，重视在思想、文化、制度等方面的重大成就和遗产。本课程的目的是让大学生通过立足中国、放眼世界，在世界科学文化的高端平台上磨练自己，提升自己的人文精神和学术能力，为成为新时代的创新型人才奠定基础。旨在用中国人眼光来分析、透视欧洲文化的发展过程。分专题讲授从希腊到文艺复兴的欧洲文化，着重分析各个时期欧洲文化的特征、民族性格、国民性、思维方式、文化传统、优缺点，并从全球化角度探讨文明的整合问题。认为东西方文明的互相整合是世界文明发展的趋势。课程置放大量阅读材料，帮助学生了解学术动态、基本史料、发展脉络、注重学术性和前沿性。

**英文简介 (Course Description):**

"European Culture From Classical Greece to the Renaissance" is a general course of Peking University. It is a national outstanding course selected by the Ministry of Education in 2006, a first-class undergraduate course selected by the Ministry of Education in 2018, and a national excellent resource sharing course selected in 2014. The purpose of this course is to help college students look at the world through China viewpoint and become an innovative talent by improving their humanist spirit and academic ability in the new era.

-End-

**课程号 (Course Number):** 00333050

**课程名称 (Course Title):** 金工实习/Metalworking Practice

**开课院系 (School/Department):** 材料科学与工程学院/School of Materials Science and Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** 高嵩, 张杨飞, 莫凡洋

**先修课程 (Prerequisites):** 无

**中文简介:**

本课程共60学时3学分, 学生暑期完成。教师授课和工厂实习同时进行, 教师授课占22学时, 工厂实习占38学时。主要培养学生金属加工和机械操作的基本技能。通过金工实习使学生了解实验安全、工艺技术及工业机械操作的基本知识和流程。课程共分十个章节, 包括铸造、焊接、钢的热处理、切削加工基本知识、车工、铣工、刨工、磨工、钳工、数控加工技术等实践内容。

**英文简介 (Course Description):**

This is a one-semester course designed to introduce the student to basic metal working and machining concepts. This hands-on course will introduce students to many metal characteristics and machining procedures. Students will learn safety, craftsmanship, and an appreciation of the machining industry. The class includes casting, welding, cutting, lathe, milling machine, planing machine, and digital control machining techniques etc.. The experience and knowledge gained in this course will begin to develop an appreciation of industrial design, craftsmanship, orderly procedures, safe work habits, pride in their work, integrity, proper work ethic, and an understanding of hand and power tools used in the metals shop.

-End-

**课程号 (Course Number):** 23200017

**课程名称 (Course Title):** 工程实训/Engineering Training

**开课院系 (School/Department):** 材料科学与工程学院/School of Materials Science and Engineering

**学分 (Credits):** 3

**授课教师 (Faculty):** 高嵩, 张杨飞, 莫凡洋

**先修课程 (Prerequisites):** 无。

**中文简介:**

课程内容以传统机械加工及材料加工工艺为基础, 使学生系统掌握工程训练的一些基本操作技能和各种材料加工方法; 熟练掌握常用设备的结构原理及其安全操作规程、加工设备的操作方法和加工技能。在此基础上, 进一步采用设计、仿真、实物制作相结合的方式, 完成从设计到制造的全过程, 实现工+机+智能+制造综合实训。本课程进阶将3D打印、人工智能和机器人、大型仪器设备讲解与观摩、实物制作等技术引入教学环节中, 全面提升教学实践方法和科学研究手段, 引导学生具有创新意识, 数据意识, 效率意识, 懂得掌握先进工具的重要性, 形成基础学科拔尖学生培养的创新范式。推出“理论实践融合、项目贯穿始终、智能化全链条”的全新实践教学模式, 不断探索卓越创新工程人才培养, 打造成一门“大国工匠必修课”。

**英文简介 (Course Description):**

The course content is based on traditional machining and material processing

technology, so that students can systematically master a variety of material processing methods of engineering training; Familiar with the structure principle of common equipment and its safe operation procedures, operation methods and processing skills of processing equipment. On this basis, further using the design, simulation, physical production of a combination of the way to complete the whole process from design to manufacturing, to achieve industrial + machine + intelligent+manufacture comprehensive practical training. This course will further introduce 3D printing, artificial intelligence, robotics, explain and observe large instruments and equipment, physical production and other technologies into the teaching process, comprehensively improve teaching practice methods and scientific research methods, guide students to have the awareness of innovation, data awareness, efficiency awareness, understand the importance of mastering advanced tools, and form an innovation paradigm for cultivating top-notch students in basic disciplines. It has launched a new practical teaching model of "integration of theory and practice, throughout the project, and the whole intelligent chain", constantly exploring the cultivation of outstanding and innovative engineering talents, and building it into a "compulsory course for craftsmen in a big country".

-End-

**课程号 (Course Number):** 23200018

**课程名称 (Course Title):** 工程实训B/Engineering Training B

**开课院系 (School/Department):** 材料科学与工程学院/School of Materials Science and Engineering

**学分 (Credits):** 2

**授课教师 (Faculty):** 高嵩, 张杨飞, 莫凡洋

**先修课程 (Prerequisites):** 无。

#### 中文简介:

《工程实训B》这门课程是针对农学、医学、人文、经管类等非理工科专业学生开设,通过传统机械加工工艺、先进制造技术的学习和实践,使学生对工程材料与制造工艺形成感性认知。

从学科特点和人才培养目标出发,各院系各学科均有不同程度的实践类实验教学需求。本门课程在保留一定量的基本实训操作外,再根据各院系、各学科特色设置具有针对性、创新性、探索性、强度存在差别性的授课模块,供不同学科学生进行选择,包括数控编程、虚拟仿真、3D打印、AI实训、大型仪器设备认知等。

在训练学生创新意识和实践动手能力的同时,着重培养学生的工程意识、劳动意识;培养学生勤于思考、开拓创新、勇于实践、理论联系实际的作风;以及热爱劳动、团结互助等优良品质,拓宽专业视野,增强就业竞争力。

#### 英文简介 (Course Description):

"Engineering Training B" is a course offered to students in various majors such as

agriculture, medicine, humanities, and economics and management. Through the study and practice of traditional mechanical processing technology and advanced manufacturing technology, students can form a perceptual understanding of engineering materials and manufacturing processes.

From the perspective of disciplinary characteristics and talent training objectives, each college and discipline has different practical experimental teaching needs to varying degrees. In addition to retaining a certain amount of basic operations for engineering training, this course sets up targeted, innovative, exploratory, and different teaching modules according to the characteristics of each college and discipline for students to choose from. These modules include numerical control programming, virtual simulation, 3D printing, AI training, and preliminary exploration of large-scale instrument equipment.

While training students' innovative awareness and practical skills, this course focuses on cultivating students' engineering awareness and labor awareness; encouraging students to think critically and creatively; fostering a willingness to experiment and apply theory to practice; as well as promoting positive qualities such as a love of labor and unity and mutual assistance. It broadens students' professional horizons and enhances their competitiveness in employment.

-End-

**课程号 (Course Number):** 01132679

**课程名称 (Course Title):** 产业实习实践/Industry practice

**开课院系 (School/Department):** 生命科学学院/College of Life Sciences

**学分 (Credits):** 3

**授课教师 (Faculty):** 王世强 教授 Professor, 唐平 讲师 Lecturer

**先修课程 (Prerequisites):** 无

#### **中文简介:**

本课程主要内容为, 组织学生赴产业相关单位进行不少于4周的实习实践, 并在实践前进行相关技能培训, 实践后进行总结报告。目的是引导学生通过亲身实践深入了解产业运作模式和发展方向, 树立个人职业发展目标, 进而合理规划学业和职业生涯。

#### **英文简介 (Course Description):**

The main content of this course is to organize students to go to industry enterprises for at least four weeks of practice. Students should be trained in relevant skills before practice. After practice, students need to make a summary report. Through summer internship in enterprises, this course will guide students to deeply understand the operation mode and development direction of enterprises. Through personal practice, students will establish personal career development goals, and then rationally plan their academic and career.

-End-

**课程号 (Course Number):** 19530004

**课程名称 (Course Title):** 城乡建成环境文化遗产研究与实践调查/Urban and Rural Built Environmental Cultural Heritage Research and Practice Investigation

**开课院系 (School/Department):** 建筑与景观设计学院/School of Architecture and Landscape

**学分 (Credits):** 2

**授课教师 (Faculty):** 汪芳 教授 Professor

**先修课程 (Prerequisites):** 无强制性先修课程。建议选课学生先修以下三类课程:

- 1) 北京大学开设的“社会综合实践调查”本科生课程;
- 2) 北京大学各院系开设的社会实践类相关课程;
- 3) 北京大学考古文博学院、城市与环境学院等院系开设的遗产类相关课程。

#### **中文简介:**

“城乡建成环境文化遗产研究与实践调查”暑期课程是为全校本科生开设的野外调研课程，作为对“国家级一流本科课程”——社会综合实践调查课程的补充和延续。本暑期课程拟邀请地理学、考古学、水文水资源等相关领域专家开展跨学科教学，将理论与实践结合，聚焦于保有丰富物质遗存与文化资源的中国传统村落，多学科交叉，从自然地理、社会经济、建筑风貌、人文历史等方面认知文化遗产和传统村落，体悟并探索城镇化、城乡协同、地方性、流动性等多元视角及语境之下的文化遗产活态保护方法与内涵。课程着眼于引导学生积极探索历史过程中建成环境文化遗产的演变与响应机制，培养服务城乡未来发展的专业人才；强调文化遗产保护更新的区域性和交叉性，建立起一个更为全面科学认识建成环境文化遗产的知识框架。

#### **英文简介 (Course Description):**

The “Urban and Rural Built Environmental Cultural Heritage Research and Practice Investigation” summer course is open for undergraduate students, and serves as a supplement and continuation of the course of Social Practice and Investigation which is a “national first-class undergraduate course”. In the summer course, experts in related fields will be invited to carry out interdisciplinary discussion combining theory with practice, and focusing on the Chinese traditional villages that retain rich material relics and cultural resources. Students are encouraged to understand the villages from the aspects of physical geography, social economy, landscape architecture, human history, etc., and explore the connotation and methods of the cultural heritage protection from different perspectives in the contexts of urbanization, urban-rural development, locality and mobility. This course aims to guide students to actively explore the evolution and response mechanism of cultural heritage in the historical process of the built environment, and cultivate professional talents to serve the future urban and rural development; emphasizes the regional and cross-disciplinary character of cultural heritage conservation and renewal, and establishes a comprehensive and scientific framework of cultural heritage.

-End-

**课程号 (Course Number):** 06733030

**课程名称 (Course Title):** 教育与人工智能/Education and Artificial Intelligence

**开课院系 (School/Department):** 教育学院/Graduate School of Education

**学分 (Credits):** 2

**授课教师 (Faculty):**

**先修课程 (Prerequisites):** 计算机基础

**中文简介:**

最近，以各个AlphaGo战胜围棋世界冠军等重大事件为代表的人工智能的重大突破，对于教育而言具有三种含义。首先这是教育的胜利，其次将对教育教学产生正面的促进作用、提高教学的产出和投入比，第三将挑战现有的教育制度和教师工作。本课程将从教育学、教育技术、教育经济学、人工智能、技术哲学等多学科的视角、全方位介绍教育、教育技术与人工智能的复杂关系，分析人工智能在教育领域的应用案例，探讨前沿技术在教育领域应用的可能性。

**英文简介 (Course Description):**

This undergraduate course is designed to help students to understand the multilateral relationship among education, educational technology and artificial intelligence, to explore the potential of applying the emerging technology of artificial intelligence in education. The broad range of topics covers each of the areas in the field of artificial intelligence, and presents the current thinking in this discipline. As an introduction to artificial intelligence and educational technology, the topics include the nature of natural intelligence and artificial intelligence, the education system and its components, knowledge presentation in education, educational data mining, natural language processing and education, and an intelligent computer supported language learning system CSIEC.

-End-