2025年暑期学校课程信息

（共185门课，229门次）

目 录

课类[1]说明:
*A类课程：仅对校内学生开放
*B、C类课程：对校内和校外生开放
*国际课程：国际暑期学校项目课程，主要对国际学生开放。

序号	课程号	课程名称	课类[1]	开课系所	班号	学分	授课教师	备注
1	00333050	金工实习	A	材料科学与工程学院	1	3	高嵩,莫凡洋,王永刚,孟繁琦	6月30日-7月8日上课，授课地点在昌平新燕园校区，选课结束后建立课程群，群里通知具体课程时间和内容安排
2	23200017	工程实训	A	材料科学与工程学院	1	3	高嵩,莫凡洋,王永刚,孟繁琦	6月30日-7月8日上课，授课地点在昌平新燕园校区，选课结束后建立课程群，群里通知具体课程时间和内容安排
3	23200018	工程实训B	A	材料科学与工程学院	1	2	高嵩,莫凡洋,王永刚,孟繁琦	6月30日，7月2日-7月7日上课，地点在昌平新燕园校区，选课结束后建课程群通知具体课程时间和内容安排
4	23200018	工程实训B	A	材料科学与工程学院	2	2	高嵩,莫凡洋,王永刚,孟繁琦	6月30日，7月2日-7月7日上课，地点在昌平新燕园校区，选课结束后建课程群，群里通知具体课程时间和内容安排
5	23200031	认知实习	A	材料科学与工程学院	1	1	高鑫	上课时间7月30日-8月2日，课程具体安排以邮件通知为准
6	23200032	“材料+”科创实践	A	材料科学与工程学院	1	1	林立	上课时间7月14日-7月17日。课程具体安排以邮件通知为准

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7	01533300	城乡地域空间认知实习	A	城市与环境学院	1	1	阴劼	考试结束后，计划6.21-6.27
8	01535130	野外生态学	A	城市与环境学院	1	2	朱彪,唐志尧,吉成均	计划6月23日至7月2日，以实际通知为准
9	01537530	普通地质实习	A	城市与环境学院	1	1	张家富	计划7.8-7.12,以具体通知为准
10	01539340	地貌实习	A	城市与环境学院	1	2	张家富	计划6.23-7.7,以老师通知为准
11	12631310	环境科学野外综合实习	A	城市与环境学院	1	2	李喜青	计划6月25日到7月10日，以老师通知为准
12	12633070	自然地理综合实习	A	城市与环境学院	1	2	蒙吉军,许学工	计划6.23-7.4,以老师通知为准
13	12633130	陆面过程模型和植被遥感实习	A	城市与环境学院	1	2	张尧	预计开学前两周,院楼105，上午9-12点，下午2-5点
14	12634070	“一带一路”综合实习	A	城市与环境学院	1	2	刘鸿雁	计划俄罗斯实习,以通知为准。自然方向（环境、生态、自地）选课
15	12634070	”一带一路”综合实习	A	城市与环境学院	2	2	刘涛	计划新加坡实习,以通知为准。人文方向（人文、城规、国土）选课
16	12634080	人文地理专业综合实习	A	城市与环境学院	1	1	冯健,刘宇	计划6月22日至6月28日，以老师通知为准
17	12634090	人文地理综合社会实践实习	A	城市与环境学院	1	1	冯健	请报名至班长处,以便安排导师
18	12634180	行运北京：大运河与北京城	A	城市与环境学院	1	1	王长松	院楼205,6.23-6.28
19	12639010	综合社会实践实习	A	城市与环境学院	1	1	林坚	
20	01230470	北斗系统与时空智能	B	地球与空间科学学院	1	2	陈秀万	
21	01233170	地震概论	B	地球与空间科学学院	1	2	赵克常	第四周最有一节课程安排考试
22	01231640	普通地质实习A	A	地球与空间科学学院	1	2	张志诚	
23	01231641	普通地质实习A讨论班	A	地球与空间科学学院	1	0	黄宝春	
24	01231641	普通地质实习A讨论班	A	地球与空间科学学院	2	0	许成	
25	01231641	普通地质实习A讨论班	A	地球与空间科学学院	3	0	王久源	
26	01231641	普通地质实习A讨论班	A	地球与空间科学学院	4	0	吴辉	
27	01231641	普通地质实习A讨论班	A	地球与空间科学学院	5	0	张志诚	
28	01231641	普通地质实习A讨论班	A	地球与空间科学学院	6	0	张元元	
29	01231912	五台山地区综合地质实习	A	地球与空间科学学院	1	2	魏春景,张进江,张波,张贵宾	

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30	01231913	沉积地层古生物综合实习	A	地球与空间科学学院	1	2	薛进庄	
31	01231914	地球系统野外建模	A	地球与空间科学学院	1	3	季建清	
32	01231915	冷湖野外联合实习考察	A	地球与空间科学学院	1	2	程丰	
33	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	1	0	魏春景	
34	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	2	0	张进江	
35	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	3	0	张贵宾	
36	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	4	0	张波	
37	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	5	0		
38	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	6	0		
39	01231916	五台山地区综合地质实习讨论班	A	地球与空间科学学院	7	0		
40	01231917	沉积地层古生物综合地质实习讨论班	A	地球与空间科学学院	1	0	黄宝琦	
41	01231917	沉积地层古生物综合地质实习讨论班	A	地球与空间科学学院	2	0	孙作玉	
42	01231917	沉积地层古生物综合地质实习讨论班	A	地球与空间科学学院	3	0	李明松	
43	01231917	沉积地层古生物综合地质实习讨论班	A	地球与空间科学学院	4	0	薛进庄	
44	01231918	地球系统野外建模讨论班	A	地球与空间科学学院	1	0	江大勇	
45	01231918	地球系统野外建模讨论班	A	地球与空间科学学院	2	0	李文博	
46	01231918	地球系统野外建模讨论班	A	地球与空间科学学院	3	0	何涛	
47	01231918	地球系统野外建模讨论班	A	地球与空间科学学院	4	0	季建清	
48	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	1	0	程丰	
49	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	2	0	姚锦仙	
50	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	3	0	李智	
51	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	4	0	梁德海	
52	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	5	0	遇赫	
53	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	6	0	沈路路	

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54	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	7	0	杜江辉	
55	01231919	冷湖野外联合实习考察讨论班	A	地球与空间科学学院	8	0	沈冰	
56	01233660	地球物理野外实习	A	地球与空间科学学院	1	2	李嘉琪	
57	01235260	3S野外综合实习	A	地球与空间科学学院	1	1	田原,李培军,范闻捷,任华忠,郭庆华	
58	00332950	航空航天工业实习	A	工学院	1	3	周超	具体安排按航空系通知
59	00333108	控制理论基础	A	工学院	1	3	黄迅	globex项目
60	00333109	可持续性理论与实践	A	工学院	1	3	Tracy Morse(校外)	globex项目
61	00333148	工程科学应用分析	A	工学院	1	3	唐少强,Emily TIAN(校外)	globex项目
62	00333181	工程项目管理中的金融决策	A	工学院	1	3	Daricha Sutivong(校外)	globex项目
63	00333390	生物医学工程实习	A	工学院	1	3	孙红芳	只限生物医学工程本专业和双学位的同学选修
64	00333724	中华语言与文化	A	工学院	1	3	ZHANG Aidong(校外)	第三周开始需安排相邻两间100人教室分组辅导讨论,globex项目
65	00333734	数据驱动的优化和学习	A	工学院	1	3	Bernd HEIDERGOTT(校外)	Globex项目
66	06239083	经济学社会实践	A	国家发展研究院	1	2	徐晋涛,蒋少翔	实际上课时间预计7月1日至10日，请提前预留附近的时间
67	06239139	量化金融专题	B	国家发展研究院	1	2	Tai	Taught in English实际上课时间:7月16-18日周三到周五，7月22-25日周二到周五,7月28-8月1日周一到周五

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68	02431420	俄罗斯政治与外交	B	国际关系学院	1	3	关贵海	6月30-7月15日上课，7月16日2-4节开卷考试
69	01034391	仪器分析原理与实验	A	化学与分子工程学院	1	4	张新祥，张新祥，李美仙，吕占霞，周颖琳，潘伟，陈明星，高珍，黄军，金长文	8月25日-9月5日开课；如选修过“仪器分析”或“仪器分析实验”课程请勿选课
70	01035260	化学中的数学	B	化学与分子工程学院	1	2	刘剑	扇形教室；周一、周二、周四、周五1-4节、6-9节
71	01035280	化工新概念	A	化学与分子工程学院	1	1	马莲(校外)	
72	01035430	化学应用与实践	A	化学与分子工程学院	1	1	高珍，邹鹏，吕占霞，马锴果，贾莉，李霄，黄军，徐金荣，王岩，徐烜峰，宋环君，何芃	6月23日-6月26日开课
73	01035480	交叉中的化学科学	B	化学与分子工程学院	1	2	张文彬	上课时间待定
74	01035490	AI化学实践	A	化学与分子工程学院	1	1	郑捷，李田	
75	12739040	环境综合实习一	A	环境科学与工程学院	1	1	刘兆荣，赵志杰	
76	12739040	环境综合实习一	A	环境科学与工程学院	2	1	刘文，董华斌	
77	12739060	环境综合实习二	A	环境科学与工程学院	1	1	刘兆荣，王婷，许伟光，陈仕意，梁宝生	
78	20133003	英国研究	A	汇丰商学院	1	3	韩冰	在英国校区开设
79	20133004	人工智能前沿技术与海外应用实践	A	汇丰商学院	1	3	Domenico Tarzia	在英国校区开设
80	20133005	数据科学与工程优化	A	汇丰商学院	1	3	Domenico Tarzia	在英国校区开设

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81	19530004	城乡建成环境文化遗产研究与实践调查	A	建筑与景观设计学院	1	2	汪芳	先修要求为汪芳《社会综合实践调查》，上课时间为7月10日至7月31日，具体可联系mla@pku.edu.cn
82	30330500	ACM/ICPC竞赛训练	B	教务部	1	2	郭炜	
83	06733020	游戏化创新思维	B	教育学院	1	2	尚俊杰	需要120人的大教室用于分组讨论
84	06733030	教育与人工智能	B	教育学院	1	2	贾积有	希望二教教室
85	06733070	数字媒体创意设计	B	教育学院	1	2	赵国栋	校外选课人数不超过10人；校外选课者须携带Windows10以上操作系统笔记本电脑上课
86	06733100	智能时代的英文学术写作	B	教育学院	1	2	范逸洲	
87	02535510	新结构智库实践	A	经济学院	1	3	于佳,张梓桐	新结构经济学实验班23级
88	02230992	文物保护理论与实践	A	考古文博学院	1	1	Renata F. Peters(校外)	6月27号，6月30日-7月2日，共4天，上午9-11，下午14-16，红五楼5201
89	04031313	学年论文	A	马克思主义学院	1	1	宋朝龙,姚苏薇	
90	00136542	人工智能通识：原理、算法及应用	B	数学科学学院	1	1	李若,卢胱	7月15日-7月24日，每周二-四3-4节和5-6节--补录
91	03132520	田野调查实践	A	社会学系	1	3	刘爱玉,卢晖临	限社会学系本科生选课。授课及实践地点：江苏省江阴市。时间：预计7月8日开始，共10天。
92	03132520	田野调查实践	A	社会学系	2	3	刘能,熊跃根	限社会学系本科生选课。授课及实践地点：江苏省江阴市。时间：预计7月8日开始，共10天。
93	03132550	社会调查实践	A	社会学系	1	4	林叶	限社会学系2022级本科生选课。
94	03134010	社会调查研究（一）	A	社会学系	1	2	王利平,张展嘉	限“严复班”学生选课。
95	03134020	社会调查研究（二）	A	社会学系	1	2	王利平	限“严复班”学生选课。
96	01130160	细胞生物学实验	A	生命科学学院	1	1	张泉,辛广伟	

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97	01130210	遗传学实验	A	生命科学学院	1	1	辛广伟,张泉	
98	01130912	南海海洋生态学野外实践	A	生命科学学院	1	2	李晟,饶广远,李大建,龙玉,贺新强,孟世勇,王戎疆	8月19-30日,广西钦州三娘湾;面向生态学专业高年级,须先修生物学野外综合实习;与任课教师商定题目后再选
99	01132677	分子生物学实验	A	生命科学学院	1	1	毕群,刘旖璇	
100	01132679	产业实习实践	A	生命科学学院	1	3	王世强,曲一铭	请关注“生声不息”公众微信号4月发布的前期培训通知,经学院审核通过后方能选课。
101	01132685	衰老生物学	A	生命科学学院	1	2	陶伟	6月30日-7月11日上课
102	01133036	生命的逻辑	B	生命科学学院	1	2	白书农,龙漫远(校外),钱紘(校外)	7月7日-7月23日，3-6节；请选课同学7月2日前邮件联系任课教师（shunongb@pku.edu.cn），分组和领取教材预习
103	01134110	生态学野外实践	A	生命科学学院	1	2	王戎疆,贺新强	6月21日-7月3日1-12节,四川王朗自然保护区;须先修生物学野外综合实习;与任课教师商讨确定题目后再选课
104	01134140	生物学综合野外实习	A	生命科学学院	1	2	王戎疆,李晟,饶广远,李大建,顾红雅,龙玉,贺新强,孟世勇	6月21日-7月3日1-12节,四川王朗自然保护区
105	01134140	生物学综合野外实习	A	生命科学学院	2	2	顾红雅,饶广远,贺新强,李大建,王戎疆,龙玉,孟世勇,李晟	6月21日-7月3日1-12节,四川王朗自然保护区

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106	01134140	生物学综合野外实习	A	生命科学学院	3	2	顾红雅,饶广远,贺新强,李大建,王戎疆,龙玉,孟世勇,李晟	6月21日-7月3日1-12节,四川王朗自然保护区
107	01138495	生命科学前沿实验模块课	A	生命科学学院	1	2	王青松,梁希同,李美琪,辛广伟,周辰	6月23日-7月4日，老生物楼323，面向生科院本科生开课，“AI辅助动物行为分析”模块
108	01138495	生命科学前沿实验模块课	A	生命科学学院	2	2	王青松,李毓龙,冯杰思,辛广伟,朱文苑	6月23日-7月4日，老生物楼223，面向生科院本科生，“基于荧光寿命检测的去甲肾上腺素探针的开发与优化”
109	01139385	生物信息产业实践	A	生命科学学院	1	2	刘凤麟,谢夏青,刘超,李程,高歌,孔雷,张泽民	8月25日-9月5日，1-8节
110	01139632	生物化学实验	A	生命科学学院	1	2	王青松,刘旖璇	
111	04130030	太极拳	A	体育教研部	1	1	李昕豫(校外)	男生班　五四317
112	04130030	太极拳	A	体育教研部	2	1		男生班　五四317
113	04130630	汉字太极与养生课	A	体育教研部	1	1	李朝斌	一体南楼302
114	04130630	汉字太极与养生课	A	体育教研部	2	1	李朝斌	一体南楼302
115	03631990	速成法语（零起点）	B	外国语学院	1	2	孙凯	
116	03633331	西班牙语及西班牙文化	B	外国语学院	1	2	宋扬	
117	00432216	量子力学（Ⅱ）	B	物理学院	1	2	钱志新	第五周周一下午2:00-5:00闭卷笔试
118	00437151	物理学科暑期专题研讨	B	物理学院	1	2	叶堉	本次专题研讨主题为《凝聚态物理》
119	21100013	水资源稀缺经济和政策分析	B	现代农学院	1	2	王金霞	7月21日-7月28日，每天下午2点-6点
120	21100048	经济学英文论文写作：从选题到发表	B	现代农学院	1	2	黄开兴	7月14-7月17日；7月21日-7月24日；每天6-9节

序号	课程号	课程名称	课类[1]	开课系所	班号	学分	授课教师	备注
121	21130001	植物发育及分子生物学	B	现代农学院	1	2	邓兴旺,林辰涛(校外),陈雪梅,杨贞标(校外),陈浩东(校外)	
122	21130002	植物知道生命的答案	B	现代农学院	1	2	邓兴旺,Daniel Chamovitz(校外)	
123	21130011	经济学视角下的资源环境热点问题	B	现代农学院	1	2	侯玲玲	6月30日-7月10日，连续11天，早9-12点
124	21130013	经济学模型CGE的基本原理及优化软件GAMS编程	B	现代农学院	1	2	解伟	7月7日-11日全天，每天上午9点-12点，下午2点-4点；7月14日上午9点-12点。上课地点为计算中心机房。
125	21130016	食物安全：政治经济学和心理学研究	B	现代农学院	1	2	王晓兵	7月12日-7月19日，上午9：00-11：00；下午15：00-17：00
126	21130018	植物大迁徙	B	现代农学院	1	2	周岳	7月7日-7月11日每天上午9点-下午4点
127	21130019	计量经济学因果识别方法详解	B	现代农学院	1	2	黄开兴	6月30日-7月3日；7月7日-7月10日；每天6-9节
128	21130020	数字技术与经济发展：文献导读和案例讨论	B	现代农学院	1	2	王悦	6.30-7.10每天9:00-12:00 （二-四节） 7.11周五9:00-12:00 （二-四节）、7-8节（15:10-17:00）
129	21130021	免疫检测	B	现代农学院	1	2	张改平,张意锋	7月15日至7月22日，每天下午六-九节
130	21130022	动物基因工程	B	现代农学院	1	2	张改平,张意锋	7月23日至7月30日，每天下午六-九节
131	21130024	环境和发展经济学：理论和前沿	B	现代农学院	1	2	赖汪洋	7月11日至7月18日，每天上午1-4节
132	01832150	媒体与国际关系	B	新闻与传播学院	1	2	陈开和	
133	01834180	全球传播的新闻叙事及想象	B	新闻与传播学院	1	2	张展(校外),吴靖	

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134	01834348	健康传播研究：理论与方法	B	新闻与传播学院	1	1	许静	
135	01834349	人工智能生成内容实务（AIGC）	B	新闻与传播学院	1	2	严富昌	
136	01831990	跨文化交流学	B	新闻与传播学院	1	2	李臻怡(校外),许静	
137	01833970	影视文化与批评	B	新闻与传播学院	1	2	张慧瑜	
138	01630078	性格分析与电影	B	心理与认知科学学院	1	2	钟杰	
139	01630081	健康人格心理学	B	心理与认知科学学院	1	2	杨眉(校外)	
140	01630733	神经美学	B	心理与认知科学学院	1	2	包燕	英文授课，须有心理学基础。
141	01630751	精神分析发展史	B	心理与认知科学学院	1	2	钟杰	
142	03033950	信息伦理与隐私保护	B	信息管理系	1	2	夏汇川	
143	03034020	数据可视化导论	B	信息管理系	1	2	步一	考试方式闭卷考试，考试时间为最后一节课7月24日5-6节。申请大教室限选50人，校内25人校外25人。
144	04830810	可编程逻辑电路设计(I)	A	信息科学技术学院	1	2	蒋伟	理二，2231
145	04833310	集成电路逻辑综合实验	B	信息科学技术学院	1	2	贾嵩,崔莹莹	理科2号楼，2623
146	04833730	集成电路的物理设计实验	B	信息科学技术学院	1	2	贾嵩,叶乐	理科2号楼2623
147	04834500	量子信息技术概论	B	信息科学技术学院	1	2	吴腾	
148	04834710	自旋与超导量子技术导论	B	信息科学技术学院	1	2	王润声	与业界人士合上
149	04835270	自动驾驶技术赏析	B	信息科学技术学院	1	2	赵卉菁	
150	04835290	模拟集成电路设计方法、工具与流程	B	信息科学技术学院	1	2	汝嘉耘	
151	04835300	人工智能前沿	B	信息科学技术学院	1	1	王乐业,董豪,仉尚航	
152	04835490	计算机科学高级专题	B	信息科学技术学院	1	2	周明辉,刘先华,边凯归,罗国杰,熊英飞,张大庆,施柏鑫,王乐业,吴文斐,仉尚航,吴垠鋆,孔雨晴,王鹤	每周一、三、五上课时间为9:00-12:00;每周二、四上课时间为9:00-12:00和14:00-17:00。
153	04835500	大模型：从基础到前沿	B	信息科学技术学院	1	2	邓志鸿	

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154	04835520	网络与系统安全实验	A	信息科学技术学院	1	2	王昭	请自带笔记本电脑
155	04835550	大模型：从基础到实战	B	信息科学技术学院	1	2	黄铁军	
156	04835640	深度学习中的高效计算方法	B	信息科学技术学院	1	2	王润声	
157	04835650	脑机接口技术前沿与实践	B	信息科学技术学院	1	2	郑雨晴	
158	04835660	微纳加工与设计	B	信息科学技术学院	1	2	王路达	
159	04835670	三维视觉基础讲解与科研实践	B	信息科学技术学院	1	1	陈文拯	
160	04835700	Python语言基础与人工智能应用	B	信息科学技术学院	1	2	陈斌	
161	04835710	光通信理论与仿真实验	B	信息科学技术学院	1	1	张帆	
162	04835720	机器学习理论中的连续时间扩散过程	B	信息科学技术学院	1	2	王若松	实际授课教师：牟文龙博士，现任多伦多大学统计科学系助理教授，个人主页：https://mouwenlong.github.io。
163	04835730	蛋白质设计中的人工智能方法	B	信息科学技术学院	1	1	张铭	
164	04330345	非物质文化遗产与中国艺术	A	艺术学院	1	2	陈均	
165	04330349	艺术与设计	A	艺术学院	1	1	BALDINI ANDREA	意大利项目
166	03835260	英语名著与电影	C	英语语言文学系	1	2	钱清	
167	03835260	英语名著与电影	C	英语语言文学系	2	2	钱清	
168	03835260	英语名著与电影	C	英语语言文学系	3	2	于莹	
169	03835260	英语名著与电影	C	英语语言文学系	4	2	于莹	
170	03835360	英汉口译	C	英语语言文学系	1	2	方舒琼	
171	03835360	英汉口译	C	英语语言文学系	2	2	方舒琼	
172	03835730	美国文化概览	C	英语语言文学系	1	2	马小琦	
173	03835730	美国文化概览	C	英语语言文学系	2	2	马小琦	
174	03835780	批判性思维与学术写作	C	英语语言文学系	1	2	张欢瑞	
175	03835780	批判性思维与学术写作	C	英语语言文学系	2	2	张欢瑞	
176	03835860	英语公众演讲	C	英语语言文学系	1	2	马小琦	
177	03835860	英语公众演讲	C	英语语言文学系	2	2	马小琦	
178	03835950	高级英语口语	C	英语语言文学系	1	2	马小琦	
179	03835950	高级英语口语	C	英语语言文学系	2	2	马小琦	
180	03835983	世界英语与英语世界	C	英语语言文学系	1	2	徐志长(校外)	
181	03835988	文化人类学概论	C	英语语言文学系	1	2	雷静(校外)	
182	03835995	学术英语阅读	C	英语语言文学系	1	2	马小琦	

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183	03835995	学术英语阅读	C	英语语言文学系	2	2	马小琦	
184	04631829	实地研学：丝绸之路上的敦煌	A	元培学院	1	1	孙飞宇	
185	02304663	哲学研讨	A	哲学系	1	2	GREVESEBASTIAN,Jennifer Nagel(校外)	8月18、19、20、22日7-8节 、10-11节（讲座），8月23、24日2-9节（研讨会）新太阳210
186	02334141	科学哲学前沿	A	哲学系	1	2	陆俏颖,Peter Takacs(校外),Nicholas J. Teh(校外)	7月7-11日，14-18日，9-11点（上课），13-15点（讨论课）
187	18730002	社会时空数据分析与建模	B	中国社会科学调查中心	1	2	顾佳峰	校内选课人数为20人，校外选课人数为80人
188	18730003	Stata数据分析与应用	B	中国社会科学调查中心	1	2	丁华,吕萍,任莉颖(校外)	校内选课人数为20人，校外选课人数为80人。
189	18730010	社会调查实务	B	中国社会科学调查中心	1	2	丁华,孙妍,吕萍,吴琼	其中10人为本校学生选课人数，剩下50人是校外学生选课人数
190	18730020	社会调查数据分析方法	B	中国社会科学调查中心	1	2	任强,顾佳峰,孔涛,吴琼,丁华,吕萍,孙妍	校内选课人数20人，其余都是校外选课人数
191	02034960	经学通论	B	中国语言文学系	1	2	顾永新	
（二）通识教育联合暑期学校课程								
192	03132210	边疆与边界：社会学的视角与方法	B	教务部	1	1	田耕	上课时间待定
193	30340103	《资治通鉴》导读	B	教务部	1	2	姜鹏(校外)	7月21日至7月31日，每周一至四，每日第1-4节
194	30340106	中国现当代小说选读	B	教务部	1	2	金理(校外)	7月7日至11日、7月14日至16日，共8天，每天3-4、7-8节
195	30340109	欧洲文化：从古典希腊到文艺复兴	B	教务部	1	2	朱孝远	6月30日至7月11日，每周二三四五，每天第3-6节
196	02335200	庄子哲学	B	教务部	1	2	郑开	6月30日-7月13日，每周一至周日，每天第3-4节，其中7月13日加上第5-6节

序号	课程号	课程名称	课类[1]	开课系所	班号	学分	授课教师	备注
197	03139110	死亡的社会学思考	B	教务部	1	2	陆杰华	7月21日-8月1日，每周一二四五，每天第1-4节
198	04334017	美索不达米亚艺术与文明	B	教务部	1	2	贾妍	6月30日至7月6日，每天3-4、7-8节；7月7日3-4节
199	06732040	经济学视角下的教育世界	B	教务部	1	2	马莉萍	6月30日至7月11日，每周一二四五，第5-8节
200	30340107	听觉文化与世界文明	B	教务部	1	2	毕明辉(校外)	上课时间待定
（三）国际暑期学校课程（英文授课）								
201	01630746	发展认知神经科学	国际课程	教务部	1	3	解万泽	国际暑期学校
202	01834300	媒体与中国社会	国际课程	教务部	1	3	陈开和	国际暑期学校
203	01834330	影像与社会	国际课程	教务部	1	3	吴靖	国际暑期学校
204	02036010	民俗学专题	国际课程	教务部	1	3	程梦稷	国际暑期学校
205	02231290	博物馆发展史	国际课程	教务部	1	2	黎婉欣	国际暑期学校
206	02432090	本土视野下的中国外交与国际事务	国际课程	教务部	1	3	陈长伟	国际暑期学校
207	02534380	应用经济计量	国际课程	教务部	1	2	秦雪征	国际暑期学校
208	02535030	企业全面风险管理	国际课程	教务部	1	2	陈凯	国际暑期学校
209	02535620	新结构经济学国际实践	国际课程	教务部	1	3	于佳	国际暑期学校
210	03132200	社会人类学与中国研究	国际课程	教务部	1	2	张力生	国际暑期学校
211	03835710	语言、文化与交际	国际课程	教务部	1	2	郑萱	国际暑期学校
212	04130721	骑行老北京城：探索千年古都回响	国际课程	教务部	1	2	卢福泉	国际暑期学校
213	04130721	骑行老北京城：探索千年古都回响	国际课程	教务部	2	2	卢福泉	国际暑期学校
214	04450001	乐韵中国：流行歌曲与社会变迁	国际课程	教务部	1	3	赵昀晖	国际暑期学校
215	04833360	情感智能机器人引论	国际课程	教务部	1	2	王韬	国际暑期学校
216	12730020	变化中的地球	国际课程	教务部	1	2	郑玫	国际暑期学校
217	21130017	发展经济学及其在中国的实践	国际课程	教务部	1	3	刘承芳	国际暑期学校
218	30340052	中国传统健身、饮食与养生	国际课程	教务部	1	2	王东敏	国际暑期学校
219	30340056	镜中观花：中国人的价值观	国际课程	教务部	1	3	韩金鹏	国际暑期学校
220	30340059	中国古典诗词	国际课程	教务部	1	2	梅申友	国际暑期学校
221	30340076	中国现当代小说与电影	国际课程	教务部	1	2	马乃强	国际暑期学校
222	30340082	“中国崛起”专题研讨课	国际课程	教务部	1	3	徐昕(校外)	国际暑期学校
223	30340094	中国改革与世界经济	国际课程	教务部	1	3	陈绍锋	国际暑期学校
224	30340095	中国经济导论	国际课程	教务部	1	3	季曦	国际暑期学校

序号	课程号	课程名称	课类[1]	开课系所	班号	学分	授课教师	备注
225	30340095	中国经济导论	国际课程	教务部	2	3	LIUMINQUAN(刘民权)	国际暑期学校，上午2-4节，下午7-8节
226	30340096	中国传统表演艺术	国际课程	教务部	1	3	张新亚(校外)	国际暑期学校
227	E1273914	气候变化与可持续发展	国际课程	教务部	1	3	戴瀚程	国际暑期学校
228	02930242	国际组织法导论	An Introduction to International Organizations Law	教务部	1	3	陈一峰	国际暑期学校,外聘教师PETER Quayle
229	02930239	中国刑事司法体系导论	Introduction to Chinese Criminal Justice System	教务部	1	3	江溯	国际暑期学校

课程目录Course Catalog

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，莫凡洋，王永刚，孟繁琦

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，莫凡洋，王永刚，孟繁琦

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，莫凡洋，王永刚，孟繁琦

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、Al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.

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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，莫凡洋，王永刚，孟繁琦

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）： 23200031
课程名称（Course Title）：认知实习/Cognitive 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）： 1
授课教师（Faculty）： 高鑫

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技术领域青年人才，材料科学与工程学院设置认知实习课程。材料科学与工程学院开展授课工作，组建具有丰富科研与产业实践的师资团队，合作企业提供丰富的实践资源。课程旨在引导学生在科技大变革的背景下，突破研究与思维范式，思考如何“做有趣的研究，做有意义的研究”，让学生能够走进企业，了解企业，做到“有所学，有所用”。本课程具体将采用“课程讲授/报告、企业参观、企业实践”等方式进行。

英文简介（Course Description）：
In order to accelerate the cultivation of young talents in the field of engineering, the School of Materials Science and Engineering will set up a cognitive practice course, focusing on the advances of materials science. The cooperative enterprises would provide industrial resources. The course aims to guide students to break thinking paradigms, and think about how to do “better” research.The students will visit the enterprise, and learn about the enterprise. This course will be conducted through course lectures and corporate tour/practice.

-End-

课程号（Course Number）： 23200032
课程名称(Course Title)：“材料+”科创实践/"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）： 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，以天津市区及滨海新区、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院、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 assisstants. 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）： 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和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 plateforms 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）：12631310
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）：2
授课教师（Faculty）：李喜青

先修课程（Prerequisites）：无

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与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。在课程中还会带领学生了解环境污染和各类疾病的关系，学习流行病知识和和疾病控制与预防等方面知识。另外，课程还将纳入劳动实践和思政等内容和环节。

英文简介（Course Description）：
The course is highlighted by combination of class teaching and simulation show with field practice and operation. 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 multidisciplinary 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 ability

for analyzing and resolving the real problems. In addition, students will get to first-hand knowledge of relationships between pollutants and health, epidemiology, and disease control and prevention.

-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，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）： 张尧

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 sptio-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

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）： 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）： 刘涛

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，刘宇

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）： 12634180
课程名称（Course Title）：行运北京：大运河与北京城/The Grand Canal and Beijing
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）： 王长松

先修课程（Prerequisites）：无

中文简介：
本课以大运河与北京城关系为主题，通过系列运河发展变迁和北京城建设关系的报告，结合运河水源地、园林庙宇、桥梁闸坝、行船体验等实地参访考察，沉浸式体验和探究中国古代漕运制度、水利技术、文化景观、历史街区等演变过程，学习历史地理学相关理论、知识和研究方法，理解和学习世界遗产、历史街区的保护与应用的内容和重要意义。

英文简介（Course Description）：
This course takes the relationship between the Grand Canal and Beijing as the theme. Through a series of lectures on the development and change of canals and the construction of Beijing City, combined with field visits to water sources, gardens, temples, bridges, dams, etc, this course immersive experiences and explores the evolution process of China's ancient water transport system, water technology, cultural landscape, historical blocks, etc. To learn the relevant theories, knowledge, and research methods of historical geography, and to understand and learn the content and significance of the protection of world heritage and historical blocks.

-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）： 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。
本课程依托中国卫星导航定位协会北斗产教融合创新专业委员会（北京大学遥感与地理信息系统研究所）、北京青少年拔尖创新人才培养基地（北京大学）、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“北斗遨翔”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“线上+线下”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 Beidou Industry Education Integration Innovation Professional Committee (the Institute of Remote Sensing and Geographic Information Systems at Peking University) of GNSS and LBS Association of China, Beijing Youth Top-notch Innovative Talent Cultivation Base (Peking University), 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 BDShare 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 on-line and/or off-line 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）： 01231640
课程名称（Course Title）：普通地质实习A/Introdution 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）：
Introdution 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 erea. You can gain additional life skills, including critical-thinking, problem-solving, team-work, scientific writing, and professionalism. You may be 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.

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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）： 许成

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）： 王久源

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）： 吴辉

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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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）： 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。

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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）： 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.

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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）： 魏春景，张进江，张波，张贵宾

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）：01231913
课程名称(Course Title)：沉积地层古生物综合实习/Geological Excursion on Sedimentology, Paleontology and Bisotratigraphy
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）：薛进庄

先修课程（Prerequisites）：普通地质学、结晶矿物学、岩石学、古生物学、地史学等

中文简介：
本课程是在以前的综合地质实习（2020年以前在三峡地区、2020年以后在贵州地区）基础上建立的、为地质学专业学生学习沉积学、地层学和古生物学的野外实践性课程。开设此课程的目的包括：1）通过实地地质剖面的观察，使学生能更好地通过理论联系实际的方式掌握所学的地质学基础知识；2）通过对若干条剖面的实地考察，让学生认识主要沉积岩石类型、沉积结构和构造，以及主要的生物化石类型，分析和判定沉积相的类型和地层剖面所展示的地层发育序列和变化，了解和认识华南扬子地块的地质发展演化历史；3）通过本课程的实践，让学生学习和了解沉积学、地层学和古生物学研究的野外基本工作方法，并锻炼和培养学生进行野外地质工作技能。

英文简介（Course Description）：
This is a practical course for students in majors of geology and geochemistryon sedimentology, plaeontology and biostratigraphy, including a 10-day field excursion to visit geological sections ranging from latest Protozoic to Triassic in South China and the geoparks.

-End-

课程号（Course Number）：01231914
课程名称（Course Title）：地球系统野外建模/Earth system investigation and modelling
开课院系（School/Department）：地球与空间科学学院/School of Earth and Space Sciences
学分（Credits）：3
授课教师（Faculty）：季建清

先修课程(Prerequisites)：(1)非本专业的同学，完成大学本科基础学科和通识课程学习（无论是理工人文社科类）；（2）本专业的修课同学，完成地球系统科学，地球系统演化和部分地球科学课程学习。

中文简介：
“八千里路、云和月（科学旅行），八千里山川、冷暖和天地（地球系统）”。

课程围绕祁连山东段，用兰州中川-永登-乌稍岭-古浪-武威-金昌-焉支山-山丹-张掖-肃南-扁都口-峨堡-祁连-热水镇-青海湖-拉脊山-积水峡-临夏（和政）-刘家峡-河口古镇-兰州中川，总行程约4000千米闭环科学旅行来实现地球系统科学主题的野外教学。具体包括（1）古生代祁连洋和板块构造，（2）青藏高原东北缘及与蒙古高原的接壤，（3）季风与西风带分界和进退，（4）冰川、祁连山、河流、黄土和沙漠戈壁及其生态系统，（5）地球冷暖（新生代和第四纪）与河西走廊（丝绸之路）兴衰，（6）临夏（和政）生命庇护所和脊椎生物的盛衰密码，（7）黄河与文明，“中国”的缘起和演变记录，综合板块、高原、山脉、冰冻圈、河流、盆地、生命、地貌、全球变化和人类家园、文明文化，进而落实为地球系统科学的调查和探索实习实践中。

设计教学实习和实验实践路线12条，落实为36-40个主题，12个思考命题，包括野外生存、无人机摄像、地形制图、时间序列建造和地球系统制图等在内的10项技能训练。通过课程，修课同学一方面饱览祖国河山、西部风光和地球系统演变下的生命荣枯盛衰，还能够逐步健全地球系统科学系统完整知识体系和培养开展调查探索能力。

英文简介（Course Description）：

In order to foster a greater understanding of Earth systems science we need to build an understanding of the whole Earth system, and to do that we have to increase our knowledge of the component parts and the ways in which these interact. So we need to know how the Earth works as a planet today and how some components of the systems have evolved over geological time in response to changes in others. We design a 4000-kilometer professional science travel, which covers the eastern Qilian mountain range including Lanzhou, Wuwei, Zhangye, Haibei district(Qilian), Qinghai Lake, Xining, Hainan District and Linxia(Hezheng).

There are 7 main aspects will be involved in the science trip with the overall aim being to produce a holistic approach to understanding the Earth system and to give insights into the complex planet on which we live. a-Oceanic crust and plate tectonics; b-Qingzang Plateau and Mengolia Plateau; c-Monsoon region and westerlies; d- Qilian Mountain range, Cryosphere, rivers, loess, desert, e-Cenozoic global Change (cooling and warming) and the Rise and fall of Hexi corridor; f- Life cradle in Hezhen basin and ecology; g-Huanghe Rivers and Chinese civilization, culture.

The whole course consists of 16 broad, socially relevant and multidisciplinary themes: plate, plateau, mountain, glacier, river, basin, climate, soils, hazards, life, landscape, global change, habitat for humanity, civilization, culture, regional economies and so on. 10 skills, such as field survival, UAV photography, Earth system mapping, time-series construction and analysis, will be brought in the course. A major issue is providing a sufficient depth of information for modelling while still covering a breadth that integrates the components of the system adequately. The aim is to give an understanding of how the world works, not only currently but throughout its history.

-End-

课程号（Course Number）： 01231915

课程名称（Course Title）：冷湖野外联合实习考察/Joint Field Internship Expedition in Lenghu, Qaidam basin
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）：程丰

先修课程（Prerequisites）：本课程面向低年级本科生，建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本实习课程旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

英文简介（Course Description）：
This internship course aims to deepen students' understanding of geology and planetary science through field investigations of the Qaidam Basin and its surrounding areas, exploring their Mars-like geological features. Located in western China, the Qaidam Basin is renowned for its unique geological landscape, extreme climatic conditions, and arid desert landforms, which bear similarities to the surface morphology of Mars and have garnered widespread attention. Through this course's internship, students will have the opportunity to personally experience and explore these mysterious and magnificent geological landscapes, thereby deepening their knowledge of Earth and planetary formation and evolution.

The course will be divided into three components: classroom lectures, field internship surveys, and indoor testing and analysis. Classroom lectures will focus on introducing fieldwork methods, the geological overview of the Qaidam Basin, and related topics. Field internship surveys will cover multiple geological routes (such as Mars-like campsites, Chaka Salt Lake, Kunlun Pass, etc.), where students will design and conduct small-scale basic scientific research projects based on their interests and professional orientations, such as erosion features of wind-eroded landforms, aridification in inland Asia, petroleum extraction and abandoned cities, synergistic effects of life and environment under extreme climates, permafrost thawing and carbon cycling, among others. Indoor testing and analysis will revolve around these basic scientific questions.

This course aims to cultivate students' scientific research and analysis capabilities through field investigations and data analysis, expand their knowledge in the fields of geology and planetary science, deepen their understanding of Earth and planetary geological evolution, and lay a solid foundation for future scientific research and exploration.

-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 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.

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课程号（Course Number）： 01231916
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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：
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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：
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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。

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学分（Credits）： 0
授课教师（Faculty）：

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

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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。

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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）：

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：
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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）：

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

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课程号（Course Number）：01231917
课程名称（Course Title）：沉积地层古生物综合地质实习讨论班/Seminar on Geological Excursions on Sedimentology, Paleontology and Biostratigraphy
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）：黄宝琦

先修课程（Prerequisites）：普通地质学、结晶矿物学、岩石学、古生物学等

中文简介：
本课程是配合”沉积地层古生物综合实习“课程，为地质学专业学生学习沉积学、地层学和古生物学开设的讨论实践课程、开设此课程的目的包括：1）通过实地地质剖面的观察，使学生能更好地通过理论联系实际的方式掌握所学的地质学基础知识；2）通过对若干条剖面的实地考察，让学生认识主要沉积岩石类型、沉积结构和构造，以及主要的生物化石类型，分析和判定沉积相的类型和地层剖面所展示的地层发育序列和变化，了解和认识华南扬子地块的地质发展演化历史；3）通过本课程的实践，让学生学习和了解沉积学、地层学和古生物学研究的野外基本工作方法，并锻炼和培养学生进行野外地质工作技能；了解地质历史上发生过的一些重大地质生

物事件。

英文简介（Course Description）：
It is a seminar for practical course of "Geological Excursions on Sedimentology, Paleontology and Biostratigraphy" to for students in majors of geology and geochemistry to train their field work skill and expand their knownledge on sedimentology, plaeontology and biostratigraphy.

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课程号（Course Number）：01231917
课程名称（Course Title）：沉积地层古生物综合地质实习讨论班/Seminar on Geological Excursions on Sedimentology, Paleontology and Biostratigraphy
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）：孙作玉

先修课程（Prerequisites）：普通地质学、结晶矿物学、岩石学、古生物学等

中文简介：
本课程是配合”沉积地层古生物综合实习“课程，为地质学专业学生学习沉积学、地层学和古生物学开设的讨论实践课程、开设此课程的目的包括：1）通过实地地质剖面的观察，使学生能更好地通过理论联系实际的方式掌握所学的地质学基础知识；2）通过对若干条剖面的实地考察，让学生认识主要沉积岩石类型、沉积结构和构造，以及主要的生物化石类型，分析和判定沉积相的类型和地层剖面所展示的地层发育序列和变化，了解和认识华南扬子地块的地质发展演化历史；3）通过本课程的实践，让学生学习和了解沉积学、地层学和古生物学研究的野外基本工作方法，并锻炼和培养学生进行野外地质工作技能；了解地质历史上发生过的一些重大地质生物事件。

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课程号（Course Number）：01231917
课程名称（Course Title）：沉积地层古生物综合地质实习讨论班/Seminar on Geological Excursions on Sedimentology, Paleontology and Biostratigraphy
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）：李明松

先修课程（Prerequisites）：普通地质学、结晶矿物学、岩石学、古生物学等

中文简介：
本课程是配合”沉积地层古生物综合实习“课程，为地质学专业学生学习沉积学、地层学和古生物学开设的讨论实践课程、开设此课程的目的包括：1）通过实地地质剖面的观察，使学生能更好地通过理论联系实际的方式掌握所学的地质学基础知识；2）通过对若干条剖面的实地考察，让学生认识主要沉积岩石类型、沉积结构和构造，以及主要的生物化石类型，分析和判定沉积相的类型和地层剖面所展示的地层发育序列和变化，了解和认识华南扬子地块的地质发展演化历史；3）通过本课程的实践，让学生学习和了解沉积学、地层学和古生物学研究的野外基本工作方法，并锻炼和培养学生进行野外地质工作技能；了解地质历史上发生过的一些重大地质生物事件。

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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）：薛进庄

先修课程（Prerequisites）：普通地质学、结晶矿物学、岩石学、古生物学等

中文简介：
本课程是配合”沉积地层古生物综合实习“课程，为地质学专业学生学习沉积学、地层学和古生物学开设的讨论实践课程、开设此课程的目的包括：1）通过实地地质剖面的观察，使学生能更好地通过理论联系实际的方式掌握所学的地质学基础知识；2）通过对若干条剖面的实地考察，让学生认识主要沉积岩石类型、沉积结构和构造，以及主要的生物化石类型，分析和判定沉积相的类型和地层剖面所展示的地层发育序列和变化，了解和认识华南扬子地块的地质发展演化历史；3）通过本课程的实践，让学生学习和了解沉积学、地层学和古生物学研究的野外基本工作方法，并锻炼和培养学生进行野外地质工作技能；了解地质历史上发生过的一些重大地质生物事件。

英文简介（Course Description）：
It is a seminar for practical course of "Geological Excursions on Sedimentology, Paleontology and Biostratigraphy" to for students in majors of geology and geochemistry to train their field work skill and expand their knownledge on sedimentology, plaeontology and biostratigraphy.

-End-

课程号（Course Number）： 01231918
课程名称（Course Title）：地球系统野外建模讨论班/Seminar on Earth system investigation and modelling
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）： 江大勇

先修课程（Prerequisites）： 地球科学概论等相关地球科学基础课程

中文简介：
课程围绕祁连山东段，用兰州中川-永登-乌稍岭-古浪-武威-金昌-焉支山-山丹-张掖-肃南-扁都口-峨堡-祁连-
热水镇-青海湖-拉脊山-积水峡-临夏（和政）-刘家峡-河口古镇-兰州中川，总行程约4000千米闭环科学旅行
来实现地球系统科学主题的野外教学配套的讨论班教学

英文简介（Course Description）：
We design a 4000-kilometer professional science travel, which covers the eastern Qilian mountain range including Lanzhou, Wuwei, Zhangye, Haibei district(Qilian), Qinghai Lake, Xining, Hainan District and Linxia(Hezheng). In order to foster a greater understanding of Earth systems science we need to build an understanding of the whole Earth system, and to do that
we have to increase our knowledge of the component parts and the ways in which these interact. So we need to know how the Earth works as a planet today and how some components of the systems have evolved over geological time in response to changes in others.

-End-

课程号（Course Number）： 01231918
课程名称（Course Title）：地球系统野外建模讨论班/Seminar on Earth system investigation and modelling
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）：李文博

先修课程（Prerequisites）：地球科学概论等相关地球科学基础课程

中文简介：
课程围绕祁连山东段，用兰州中川-永登-乌稍岭-古浪-武威-金昌-焉支山-山丹-张掖-肃南-扁都口-峨堡-祁连-
热水镇-青海湖-拉脊山-积水峡-临夏（和政）-刘家峡-河口古镇-兰州中川，总行程约4000千米闭环科学旅行
来实现地球系统科学主题的野外教学配套的讨论班教学

英文简介（Course Description）：
We design a 4000-kilometer professional science travel, which covers the eastern Qilian mountain range including Lanzhou, Wuwei, Zhangye, Haibei district(Qilian), Qinghai Lake, Xining, Hainan District and Linxia(Hezheng). In order to foster a greater understanding of Earth systems science we need to build an understanding of the whole Earth system, and to do that
we have to increase our knowledge of the component parts and the ways in which these interact. So we need to know how the Earth works as a planet today and how some components of the systems have evolved over geological time in response to changes in others.

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课程号（Course Number）：01231918
课程名称（Course Title）：地球系统野外建模讨论班/Seminar on Earth system investigation and modelling
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）：何涛

先修课程（Prerequisites）：地球科学概论等相关地球科学基础课程

中文简介：
课程围绕祁连山东段，用兰州中川-永登-乌稍岭-古浪-武威-金昌-焉支山-山丹-张掖-肃南-扁都口-峨堡-祁连-
热水镇-青海湖-拉脊山-积水峡-临夏（和政）-刘家峡-河口古镇-兰州中川，总行程约4000千米闭环科学旅行
来实现地球系统科学主题的野外教学配套的讨论班教学

英文简介（Course Description）：
We design a 4000-kilometer professional science travel, which covers the eastern Qilian mountain range including Lanzhou, Wuwei, Zhangye, Haibei district(Qilian), Qinghai Lake,

Xining, Hainan District and Linxia(Hezheng). In order to foster a greater understanding of Earth systems science we need to build an understanding of the whole Earth system, and to do that
we have to increase our knowledge of the component parts and the ways in which these interact. So we need to know how the Earth works as a planet today and how some components of the systems have evolved over geological time in response to changes in others.

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课程号（Course Number）： 01231918
课程名称（Course Title）：地球系统野外建模讨论班/Seminar on Earth system investigation and modelling
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）： 季建清

先修课程（Prerequisites）： 地球科学概论等相关地球科学基础课程

中文简介：
课程围绕祁连山东段，用兰州中川-永登-乌稍岭-古浪-武威-金昌-焉支山-山丹-张掖-肃南-扁都口-峨堡-祁连-
热水镇-青海湖-拉脊山-积水峡-临夏（和政）-刘家峡-河口古镇-兰州中川，总行程约4000千米闭环科学旅行
来实现地球系统科学主题的野外教学配套的讨论班教学

英文简介（Course Description）：
We design a 4000-kilometer professional science travel, which covers the eastern Qilian mountain range including Lanzhou, Wuwei, Zhangye, Haibei district(Qilian), Qinghai Lake, Xining, Hainan District and Linxia(Hezheng). In order to foster a greater understanding of Earth systems science we need to build an understanding of the whole Earth system, and to do that
we have to increase our knowledge of the component parts and the ways in which these interact. So we need to know how the Earth works as a planet today and how some components of the systems have evolved over geological time in response to changes in others.

-End-

课程号（Course Number）： 01231919
课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）：程丰

先修课程（Prerequisites）：本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

英文简介（Course Description）：
This discussion seminar, together with the internship course, aims to deepen students' understanding of geology and planetary science through field investigations of the Qaidam Basin and its surrounding areas, exploring their Mars-like geological features. Located in western China, the Qaidam Basin is renowned for its unique geological landscape, extreme climatic conditions, and arid desert landforms, which bear similarities to the surface morphology of Mars and have garnered widespread attention. Through this course's internship, students will have the opportunity to personally experience and explore these mysterious and magnificent geological landscapes, thereby deepening their knowledge of Earth and planetary formation and evolution.
The course will be divided into three components: classroom lectures, field internship surveys, and indoor testing and analysis. Classroom lectures will focus on introducing fieldwork methods, the geological overview of the Qaidam Basin, and related topics. Field internship surveys will cover multiple geological routes (such as Mars-like campsites, Chaka Salt Lake, Kunlun Pass, etc.), where students will design and conduct small-scale basic scientific research projects based on their interests and professional orientations, such as erosion features of wind-eroded landforms, aridification in inland Asia, petroleum extraction and abandoned cities, synergistic effects of life and environment under extreme climates, permafrost thawing and carbon cycling, among others. Indoor testing and analysis will revolve around these basic scientific questions.
This course aims to cultivate students' scientific research and analysis capabilities through field investigations and data analysis, expand their knowledge in the fields of geology and planetary science, deepen their understanding of Earth and planetary

geological evolution, and lay a solid foundation for future scientific research and exploration.

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课程号（Course Number）： 01231919
课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）： 姚锦仙

先修课程（Prerequisites）：本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

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Field internship surveys will cover multiple geological routes (such as Mars-like campsites, Chaka Salt Lake, Kunlun Pass, etc.), where students will design and conduct small-scale basic scientific research projects based on their interests and professional orientations, such as erosion features of wind-eroded landforms, aridification in inland Asia, petroleum extraction and abandoned cities, synergistic effects of life and environment under extreme climates, permafrost thawing and carbon cycling, among others. Indoor testing and analysis will revolve around these basic scientific questions.
This course aims to cultivate students' scientific research and analysis capabilities through field investigations and data analysis, expand their knowledge in the fields of geology and planetary science, deepen their understanding of Earth and planetary geological evolution, and lay a solid foundation for future scientific research and exploration.

-End-

课程号（Course Number）： 01231919
课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）： 李智

先修课程（Prerequisites）： 本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

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This course aims to cultivate students' scientific research and analysis capabilities through field investigations and data analysis, expand their knowledge in the fields of geology and planetary science, deepen their understanding of Earth and planetary geological evolution, and lay a solid foundation for future scientific research and exploration.

-End-

课程号（Course Number）： 01231919
课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）： 梁德海

先修课程（Prerequisites）： 本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，

以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

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-End-

课程号（Course Number）：01231919

课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin

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）：遇赫

先修课程（Prerequisites）：本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

英文简介（Course Description）：
This discussion seminar, together with the internship course, aims to deepen students' understanding of geology and planetary science through field investigations of the Qaidam Basin and its surrounding areas, exploring their Mars-like geological features. Located in western China, the Qaidam Basin is renowned for its unique geological landscape, extreme climatic conditions, and arid desert landforms, which bear similarities to the surface morphology of Mars and have garnered widespread attention. Through this course's internship, students will have the opportunity to personally experience and explore these mysterious and magnificent geological landscapes, thereby deepening their knowledge of Earth and planetary formation and evolution.
The course will be divided into three components: classroom lectures, field internship surveys, and indoor testing and analysis. Classroom lectures will focus on introducing fieldwork methods, the geological overview of the Qaidam Basin, and related topics. Field internship surveys will cover multiple geological routes (such as Mars-like campsites, Chaka Salt Lake, Kunlun Pass, etc.), where students will design and conduct small-scale basic scientific research projects based on their interests and professional orientations, such as erosion features of wind-eroded landforms, aridification in inland Asia, petroleum extraction and abandoned cities, synergistic effects of life and environment under extreme climates, permafrost thawing and carbon cycling, among others. Indoor testing and analysis will revolve around these basic scientific questions.
This course aims to cultivate students' scientific research and analysis capabilities through field investigations and data analysis, expand their knowledge in the fields of geology and planetary science, deepen their understanding of Earth and planetary

geological evolution, and lay a solid foundation for future scientific research and exploration.

-End-

课程号（Course Number）： 01231919
课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）： 沈路路

先修课程（Prerequisites）： 本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

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The course will be divided into three components: classroom lectures, field internship surveys, and indoor testing and analysis. Classroom lectures will focus on introducing fieldwork methods, the geological overview of the Qaidam Basin, and related topics.

Field internship surveys will cover multiple geological routes (such as Mars-like campsites, Chaka Salt Lake, Kunlun Pass, etc.), where students will design and conduct small-scale basic scientific research projects based on their interests and professional orientations, such as erosion features of wind-eroded landforms, aridification in inland Asia, petroleum extraction and abandoned cities, synergistic effects of life and environment under extreme climates, permafrost thawing and carbon cycling, among others. Indoor testing and analysis will revolve around these basic scientific questions.
This course aims to cultivate students' scientific research and analysis capabilities through field investigations and data analysis, expand their knowledge in the fields of geology and planetary science, deepen their understanding of Earth and planetary geological evolution, and lay a solid foundation for future scientific research and exploration.

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课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）： 杜江辉

先修课程（Prerequisites）： 本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

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课程名称（Course Title）：冷湖野外联合实习考察讨论班/Seminar on Joint Field Internship Expedition in Lenghu, Qaidam basin
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）： 沈冰

先修课程（Prerequisites）： 本讨论班面向低年级本科生，须同时修《冷湖野外联合实习考察》这门课程；建议先修本专业相关必修课，如生物科学强基班需先修《行星表面过程》。选课同学需要对地质学基础知识有一定了解，并具备一定的野外实地考察能力与团队合作精神，对行星科学有浓厚兴趣者优先。

中文简介：
本课程为《冷湖野外联合实习考察》的讨论班，旨在通过对柴达木盆地及周边地区的实地考察，探索其类火星地貌特征，以深化学员对地质学和行星科学的理解。柴达木盆地位于中国西部，

以其独特的地质景观而闻名，极端的气候条件和干旱荒漠地貌与火星表面形态相似，受到了广泛关注。通过本课程的实习，学员将有机会亲身体验并探索这些神秘而壮丽的地貌景观，从而加深对地球与行星形成演化的认识。课程将分为室内课堂授课、野外实习考察和室内测试与分析三个环节。课堂授课将重点介绍野外工作方法、柴达木盆地地质概况等内容。野外实习考察将涵盖多条地质路线（如类火星营地、察尔汗盐湖、昆仑山口等），学员将根据兴趣和专业方向分组设计并开展小型基础科学研究项目，例如风蚀地貌侵蚀特征、亚洲内陆干旱化、石油开采与废弃城市、极端气候下生命与环境协同作用、冻土消融与碳循环等。室内测试与分析将围绕这些基础科学问题展开。

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This discussion seminar, together with the internship course, aims to deepen students' understanding of geology and planetary science through field investigations of the Qaidam Basin and its surrounding areas, exploring their Mars-like geological features. Located in western China, the Qaidam Basin is renowned for its unique geological landscape, extreme climatic conditions, and arid desert landforms, which bear similarities to the surface morphology of Mars and have garnered widespread attention. Through this course's internship, students will have the opportunity to personally experience and explore these mysterious and magnificent geological landscapes, thereby deepening their knowledge of Earth and planetary formation and evolution.

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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）：李嘉琪

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。本课程的目的是：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，李培军，范闻捷，任华忠，郭庆华

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 filed practice on GIS, RS, and GPS. The main contents of this class are data acquisition, route planning, filed 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）：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）：00333108
课程名称（Course Title）：控制理论基础/Fundamentals of Control Theory
开课院系（School/Department）：工学院/College of Engineering
学分（Credits）：3
授课教师（Faculty）：黄迅

先修课程（Prerequisites）：微积分，线性代数

中文简介：
向工科本科生介绍经典和现代控制理论的基础知识，同样适合动力学与控制专业的研究生。先修课程微积分和线性代数。电子电路、信号和处理方面的知识也会对本课程有所帮助。此外，还将介绍新兴的基于机器学习的控制方法，主要是通过完成设计软件任务，学生应该有使用Python或其他类似编程语言的经验。本课程可作为工学院航空航天工程系本科生选修课。

英文简介（Course Description）：

Introduce the fundamentals of classical and modern control theories to undergraduates in Engineering. The graduate students in dynamics and control are also welcomed if their undergraduate trainings were not in control. The pre-requisite course is calculus and linear algebra. Knowledge in electronic circuits and signal and processing will be helpful too, but will be summarized in this tutorial when it is necessary. In addition, the emerging machine learning-based control methods will be introduced, mainly through the successful completion of the designed software tasks. Hence, students are expected to have experience with Python or other similar programming language. This course can act as an elective course for undergraduates of the Department of Aeronautics and Astronautics.

-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 Morse(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）： 00333148

课程名称（Course Title）：工程科学应用分析/Applied Analysis for Engineering Sciences
开课院系（School/Department）：工学院/College of Engineering
学分（Credits）：3
授课教师（Faculty）：唐少强，Emily TIAN(校外)

先修课程(Prerequisites)：Calculus (Single variate, and multi-variate), Linear Algebra, Ordinary Differential Equations.

中文简介：
本课程的目标包括：（1）介绍广泛应用于工程科学、非线性力学和其他物理科学领域的现代（1900-1990）数学方法；（2）发动学生的科研积极性，包括启发思维，明确问题并建模，以及探索相应的数学方法；（3）弥合数学工具与其物理理解之间的鸿沟。

英文简介（Course Description）：
The objectives of this course include: to show some modern (1900-1990) mathematical methods that are widely used in engineering sciences, nonlinear mechanics and other physical sciences; to help initiating research activities, namely, to boost ideas, to formulate the problem, and to explore the mathematics; to help bridging the gap between the mathematical tools and the physical understandings.

-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 valuate 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 forsingle 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）： 00333724
课程名称（Course Title）：中华语言与文化/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）： 00333734
课程名称（Course Title）：数据驱动的优化和学习/Data-Driven 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：
本课程广泛介绍了使用计算机仿真和流数据分析和优化动态随机模型的重要方面。重点是持续优化和学习及其广泛的应用领域：从社交网络到计算机网络，从金融工程到业务流程。该课程将向学生介绍递归算法的使用，通过基于仿真/数据驱动的方法来分析动态随机模型，以进行优化和学习。本课程的主要问题是如何使用仿真/流数据为现实生活中的问题做出更好、更负责任的决策。该课程还将反思我们在社会中见证的技术和数学发展。

英文简介（Course Description）：
This course gives a broad treatment of the important aspects of the use of computer simulation and of streaming data for the analysis and optimization of dynamic stochastic models. The emphasis is on continuous optimization and learning (i.e., we do not cover discrete optimization in this course). 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 recursive algorithms in analyzing dynamic stochastic models through simulation-based/data-driven methods for optimization and learning. The leading question of the course is how to use simulation/streaming-data 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）： 02431420
课程名称（Course Title）：俄罗斯政治与外交/Politics and Foreign Affairs of Russia
开课院系（School/Department）： 国际关系学院/School of International Studies
学分（Credits）： 3
授课教师（Faculty）： 关贵海

先修课程（Prerequisites）： 国际关系史，中国外交史

中文简介：
本课程是一门既研究国际政治、又研究俄罗斯历史与现实的综合性课程。它以俄罗斯国家发展的历史变迁为主线，以政治为主要内容，兼及经济、外交、文化。学习这门课，要求以当前俄罗斯现实问题为出发点，以科学的方法论为指导，把理论和实际、历史与现状结合起来，把俄罗斯社会发展与世界发展的趋势和规律联系起来。

英文简介（Course Description）：
The Lecture gives a historical review on russian past and present and makes a panorama of russian domestic and foreign policy developments.

-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。基于应用所须，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）：01034391
课程名称（Course Title）：仪器分析原理与实验/Principle and experiments of Instrumental Analysis
开课院系（School/Department）：化学与分子工程学院/College of Chemistry and Molecular Engineering
学分（Credits）：4
授课教师（Faculty）：张新祥，张新祥，李美仙，吕占霞，周颖琳，潘伟，陈明星，高珍，黄军，金长文

先修课程（Prerequisites）：普通化学，定量分析化学，普通物理，化学实验室安全技术

中文简介：
本课程将以分析化学特别是仪器分析化学的知识体系和思维方式培养为目标，通过任务式实验内容的工作，让学生对仪器分析基本知识内容框架、分析化学样品处理、分析化学数据处理及团队合作等方面进行积极参与，达到了解分析化学特别是仪器分析的基本原理、基本方法和基本应用的了解，完成仪器分析理论和实验同时进行的教学目标。

英文简介（Course Description）：
The aims of this course is to cultivate the knowledge system and thinking mode of analytical chemistry, especially instrumental analysis. Through task-based experimental content, students will actively participate in the framework of basic knowledge of instrumental analysis, analytical chemistry sample processing, analytical chemistry data analysis, and team collaboration, achieving an understanding of the basic principles, methods, and applications of analytical chemistry, especially instrumental analysis, To achieve the teaching goal of conducting both instrumental analysis theory and experiments simultaneously.

-End-

课程号（Course Number）：01035260
课程名称（Course Title）：化学中的数学/Mathematics in 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）：2
授课教师（Faculty）：刘剑

先修课程（Prerequisites）：《高等数学》、《线性代数》、《普通物理》量子力学部分、《普通物理》力学部分

中文简介：

化学吸纳统计力学和量子力学的概念和理论，已经成为分子科学的基石。《化学中的数学》课程的授课内容着眼于化学统计力学和量子力学中的数学方法，对化学研究中常用的数学分析和算法工具进行系统介绍，致力于让本科学生/低年级研究生在较短时间内对化学研究中相关的数理知识有一个较为完善和全面的基本了解，为他们在本科高年级和研究生阶段的学习和研究奠定必要的基础。

英文简介（Course Description）：
“Mathematics in Chemistry” is focused on the application of mathematical methods in quantum mechanics as well as statistical mechanics to research in chemistry. It offers 2nd/3rd-year undergraduate students or even 1st-year graduate students a comprehensive introduction to the mathematical theories and techniques of quantum mechanics/statistical mechanics employed in higher level undergraduate courses as well as graduate ones.

-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！

本课程希望能够帮助同学们及早明确自己的学习的目的和未来目标！ 帮助同学们更快地适应现代化机构的工作要求及节奏，更容易融入现代化的工作机构！从而帮助同学们更容易进入社会！并及早成为一名合格的对社会有贡献的现代化人才！

本课程以老师讲课，学生读书及小组讨论，学生演讲等多种形式同时进行。以期达到在学习的同时开阔学生的眼界，提高学生各方面的能力和见识！

英文简介（Course Description）：
This course is based on personal experiences in chemical industry more than 20 years and take chemical industry as an example to

*Introduce the development and operation of modern chemical industry, in order to help student getting an insight of the industry branch.
*Introduce the basic requirement for an employee and their career develop pass with the modern industry, to help fresh graduate finding their way in the companies and developing themselves better! And to help them getting to the society easier!

-End-

课程号（Course Number）：01035430
课程名称（Course Title）：化学应用与实践/Application and Pratice 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）：高珍，邹鹏，吕占霞，马锴果，贾莉，李霄，黄军，徐金荣，王岩，徐烜峰，宋环君，何芃

先修课程（Prerequisites）：化学实验室安全技术

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34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并承担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 enhance students' labor literacy, establish correct values regarding labor, and cultivate essential labor skills.
The curriculum consists of several modules that reflect the characteristics of the discipline of chemistry. Students can independently select and complete 34 credit hours. The practical content of each module is progressively structured. Students must first fulfill the required basic tasks and credit hours, after which they may independently choose additional tasks and take on challenging assignments to meet the total credit hour requirement.
The course includes four modules: Chemical Applications, Metalworking Practice, Social Service, and Open Practice.

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课程号（Course Number）：01035480
课程名称（Course Title）：交叉中的化学科学/Interdisciplinary 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）：2
授课教师（Faculty）：张文彬

先修课程（Prerequisites）：无

中文简介：
化学作为一门与生命、材料、能源、环境及信息等领域深度交织的中心科学，始终是推动人类社会进步和技术革新的核心驱动力。本课程以“学科交叉”为核心理念，面向化学学院以及院外、校外相关专业的本科生（大二及以上）与研究生开放。课程每年聚焦一个前沿主题（如“化学与人工智能”），通过“理论-交叉-实践-前沿”四模块进阶式教学，构建以化学为核心的多维知识体系。第一模块系统解析化学与目标学科（如人工智能）的基础理论框架，阐明其交叉原理与科学价值；第二模块深入探讨学科融合的关键路径，通过方法论剖析与案例推演，培养学生突破学科壁垒的创新性思维；第三模块通过分组实践引导学生将理论转化为具体解决方案，在实验操作与项目设计中深化对知识的具象化理解；第四模块特邀相关领域的顶尖科学家分享前沿进展，以真实科研案例揭示交叉研究的突破逻辑。课程贯穿“基础认知-思维训练-实践验证-视野拓展”的全链条培养模式，致力于打造激发跨界创新的思维实验室，使学习者在化学与多元领域的共振中凝练科学洞察力，为应对能源转型、智能材料开发等复杂挑战积淀跨学科创新能力。

英文简介（Course Description）：
As a central science deeply intertwined with fields such as life sciences, materials, energy, environment, and information technology, chemistry has always served as a core driving force for breakthroughs in human society and technological innovation. This course, grounded in the philosophy of "interdisciplinary integration," is open to graduate students and undergraduates (sophomores and above) from the Chemistry major and related disciplines. Each year, the course focuses on a cutting-edge theme (e.g., "Chemistry and Artificial Intelligence") and employs a four-module progressive framework—"theory, interdisciplinary exploration, practical application, and frontier advancement"—to construct a multidimensional knowledge system centered on chemistry. Module 1 systematically analyzes the foundational theoretical frameworks of chemistry and its target discipline (e.g., artificial intelligence), elucidating their interdisciplinary principles and scientific significance. Module 2 delves into the critical pathways of disciplinary convergence, fostering innovative thinking that transcends academic boundaries through methodological analysis and case-based simulations. Module 3 guides students in translating theories into concrete solutions via group projects, deepening tangible understanding through experimental operations and project design. Module 4 invites leading scientists to share frontier advancements, using real-world research cases to reveal the breakthrough logic of interdisciplinary studies. In summary, the course aims to create a "thought laboratory" that ignites cross-boundary innovation. By immersing learners in the resonance between chemistry and diverse fields, it refines their scientific insights and cultivates interdisciplinary problem-solving capabilities to address complex challenges such as

energy transition and smart materials development.

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课程号（Course Number）：01035490
课程名称（Course Title）：AI化学实践/Artificial Intelligence for Chemistry Laboratory
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）：郑捷，李田

先修课程（Prerequisites）：机器学习及其在化学中的应用（刘志荣老师）
Python编程相关课程
线上公开课《机器学习》（吴恩达老师）
以上课程建议但不强制要求。

中文简介：
人工智能的快速发展深刻影响并重塑着科研范式，尤其在化学领域展现出广阔的前景与潜力。在本科化学实验教学中融入人工智能赋能科学研究的实践内容，与时俱进地培养学生跨学科的编程思维与数据科学素养，帮助学生及早熟悉AI赋能化学研究的新范式十分重要。AI化学实践课程面向化学学院本科生开设，旨在通过项目制实验引导学生探索人工智能与化学研究的融合，培养学生跨学科的研究能力与创新思维。课程采用“理论指导+实验操作+协作探究”的模式，通过“化学问题→数据→模型→验证”的完整训练，帮助学生熟悉人工智能在反应预测、条件优化、谱图解析、设备自动化等重要实验场景中的应用原理与实操过程，培养学生运用AI技术和跨学科知识解决实际问题的能力，为学生未来在AI4Science领域开展原创性工作奠定基础。课程教学强调实践训练，由学生自主组队并选择研究项目，引导学生在“做中学”，结合理论讲座、方案研讨、交流与汇报等环节，通过文献调研、实验设计、实践操作、数据分析到论文撰写的完整科研训练培养学生的科学素养。课程注重过程性评价，既关注学生的实验操作、规范记录、安全环保等基本素养，也关注问题解决、创新思维和团队合作能力的培养。课程期望通过实践引导学生主动应用AI解决化学研究中的关键科学技术问题，探索新一代“化学+AI”拔尖创新人才的培养方案。

英文简介（Course Description）：
The rapid development of artificial intelligence (AI) has profoundly influenced and reshaped scientific research paradigms, particularly demonstrating broad prospects and potential in the field of chemistry. It is crucial to integrate AI-empowered scientific research practices into undergraduate chemistry laboratory teaching, fostering students' interdisciplinary programming thinking and data science literacy in a timely manner, and helping them become familiar with the new AI-driven research paradigm in chemistry at an early stage. The AI-Chemistry Practical Course, designed for undergraduate students in College of Chemistry, aims to guide students in exploring the integration of AI and chemical research through project-based experiments,

cultivating their interdisciplinary research capabilities and innovative thinking. The course adopts a "theory-guided + hands-on experimentation + collaborative inquiry" model, providing comprehensive training through the workflow of "Chemical Problems → Data → Models → Validation", which helps students understand the application principles and practical processes of AI in critical experimental scenarios such as reaction prediction, condition optimization, spectral analysis, and equipment automation. It also nurtures their ability to solve real-world problems using AI technologies and interdisciplinary knowledge, laying a foundation for their future original work in the AI4Science field.
The course emphasizes practical training, where students independently form teams to select research projects. Guided by a "learning-by-doing" approach, the curriculum combines theoretical lectures, project discussions, exchanges, and presentations. Through a complete scientific training cycle—from literature review, experimental design, practical operations, and data analysis to paper writing—students develop scientific literacy. The course focuses on process-oriented evaluation, assessing not only basic competencies such as experimental skills, standardized documentation, and safety/environmental awareness but also problem-solving abilities, innovative thinking, and teamwork. It aims to inspire students to proactively apply AI in addressing key scientific and technological challenges in chemistry, thereby exploring innovative cultivation models for the next generation of "Chemistry + AI" talents.

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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，赵志杰

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

气环境的质量监测，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 systemetic, 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 observition, explaination, 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.

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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）：刘文，董华斌

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环境的质量监测，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 systemetic, 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 observition, explaination, 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.

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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，王婷，许伟光，陈仕意，梁宝生

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 arround 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.

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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）： 韩冰

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、深度介入的浸入式教学方式，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.

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课程号（Course Number）：20133004
课程名称（Course Title）：人工智能前沿技术与海外应用实践/Frontiers in AI:Global Innovations and Applied Practices
开课院系（School/Department）：汇丰商学院
学分（Credits）：3
授课教师（Faculty）：Domenico Tarzia

先修课程（Prerequisites）：无

中文简介：
《人工智能前沿技术与海外应用实践》课程致力于加深学生对人工智能发展的理解，通过理论学习和实地参访，学生将探索 AI 的起源、大模型、自然语言处理、智能治理、具身智能、数字生命、AIGC、AI+医疗、智能经济等前沿领域，同时了解 AI 在金融、法律、汽车、医疗等行业的实际应用。课程依托北京大学与英国顶尖高校及研究机构的学术资源，结合中西教育优势，提供深度与广度兼具的学术讲座和研讨。学生将有机会亲身体验英国的 AI 研究机构和知名企业，感受科技与产业的深度融合。此外，学生还将沉浸于英国的历史名城，体验独特的文化魅力，拓宽国际化视野。

英文简介（Course Description）：
The course aims to enhance students' understanding of AI development. Through a combination of theoretical learning and field visits, students will explore topics ranging from the origins of AI, large models, natural language processing, intelligent governance, embodied intelligence, digital life, AIGC, AI+healthcare, to the intelligent economy. They will also gain insights into the practical applications of AI in industries such as finance, law, automotive, and healthcare. Leveraging the academic resources of Peking University and top UK universities and research institutions, the course integrates the educational strengths of the East and West to provide in-depth and comprehensive academic lectures and discussions. Students will have the opportunity to visit AI research institutions and renowned enterprises in the UK firsthand, experiencing the deep integration of technology and industry. Additionally, students will immerse themselves in the historical cities of the UK, appreciating its unique cultural charm and broadening their international perspective.

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课程号（Course Number）：20133005
课程名称（Course Title）：数据科学与工程优化/Data Science and Engineering Optimization
开课院系（School/Department）：汇丰商学院
学分（Credits）：3
授课教师（Faculty）：Domenico Tarzia

先修课程（Prerequisites）：无

中文简介：
《数据科学与工程优化》课程由北京大学工学院与汇丰商学院联合推出，旨在提升学生在数据科学与工程优化领域的学术视野。课程内容涵盖数据科学、人工智能、工程优化等前沿学科。学生将通过沉浸式体验，感受牛津、剑桥的学术氛围，走访世界顶尖学府，拓展国际视野。此外，学生还将游览伦敦、牛津、剑桥，参观博物馆、学术机构，与牛津学子开展圆桌论坛，探

讨中英教育体系，建立国际学术人脉。本课程为学生提供了高质量的学术资源和丰富的实践体验，是提升数据科学与工程优化能力的绝佳机会。

英文简介（Course Description）：
The course Data Science and Engineering Optimization, jointly launched by the School of Engineering and the HSBC Business School at Peking University, aims to broaden students' academic horizons in the fields of data science and engineering optimization. The curriculum covers cutting-edge disciplines such as data science, artificial intelligence, and engineering optimization. Through immersive experiences, students will engage with the academic atmosphere of Oxford and Cambridge, visit world-renowned institutions, and expand their global perspectives. Additionally, participants will explore London, Oxford, and Cambridge, tour museums and academic organizations, and participate in round-table forums with Oxford students to discuss the Chinese and British education systems while building international academic networks. This course offers high-quality academic resources and diverse practical experiences, serving as an exceptional opportunity to advance expertise in data science and engineering optimization.

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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

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.

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课程号（Course Number）：01630746
课程名称（Course Title）：发展认知神经科学/Developmental Cognitive Neuroscience
开课院系（School/Department）：教务部
学分（Credits）：3
授课教师（Faculty）：解万泽

先修课程（Prerequisites）：无

中文简介：
发展认知神经科学是近年来广受关注的交叉学科。《发展认知神经科学》这门课程将帮助心理学、神经科学等相关专业的学生更好地了解大脑与认知功能发展的特点，以及基因和经验在脑与认知发展过程中扮演的重要角色。本课程的内容将涵盖与社会、认知、情绪发展相关的重要理论及科学问题，并聚焦于神经科学如何帮助我们解答脑与认知发展相关的理论及应用问题。
本门课教授的主题包括但不限于：脑发育的理论与机制；发展认知神经科学常用的研究方法；重要认知功能，如注意、语言、记忆以及视觉等发展的神经机制；以及如何利用神经科学的手段对儿童精神病例的预后进行预测。
本课程对学生的基本要求是：了解发展认知神经科学中的前沿理论，明白大脑及重要认知功能发展的规律及机制，掌握常用的神经科学手段的原理与使用方法，包括实验设计及数据分析等。

英文简介（Course Description）：
This course explores the fascinating and complex puzzle – the developing brain, as well as how genes and experience interactively contribute to brain development and shape

who we are. In this course, we will explore the central concepts of social, cognitive, and emotional development with an emphasis on the role that neuroscience can play in raising and answering theoretical and applied developmental questions, including but is not limited to the following: How does the brain structure develop from childhood to early adulthood? What are the neuroscience tools that researchers use to study the brain in children? What are the neural mechanisms underlying the development of various cognitive functions, such as attention, language, memory, and face perception? Can neuroscience help us to determine who will develop psychopathology? This course will cover development from infancy through adolescence. We will discuss theoretical and empirical work that encompasses both typical and atypical development and emphasizes a translational approach between basic developmental science and clinical applications. The intention is to (a) lay a foundation for the students to comprehend and conduct research in brain and cognitive development and (b) introduce the students to different neuroscience perspectives and approaches used to study development.

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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.

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课程号（Course Number）：01834330
课程名称（Course Title）：影像与社会/Images and Society
开课院系（School/Department）：教务部
学分（Credits）：3
授课教师（Faculty）：吴靖

先修课程（Prerequisites）：社会理论相关

中文简介：
影像是一种传播方式，与文字、声音一起构成了我们社会的表意体系。随着媒介技术的发展，现代社会的重要特征之一就是影像充斥了人们生活的每一个角落，一方面扩大了人们的感知范围与生活经验，另一方面又补充或替代了许多传统的表达方式，比如文字和交谈。与其他各类表意方式相比，影像的诱惑是显而易见的，因为它带给我们直观、感性、轻松和奇观式的表意体验，成为许多社会传播所青睐的媒介，而广告、新闻、宣传、娱乐等活动对视觉符号的偏爱又进一步推动整个社会走向影像爆炸，影像已经超越现象成为一道独特的社会文化景观。

这门课为喜爱和关注影像文化以及影像的社会建构与社会角色的学生设计。课程的重点在于介绍和讨论组成当代社会视觉文化的重要媒介—摄影、电影、电视和数字新媒体—以及这些媒介的技术性、社会性和文化性。本课程主要涵盖三个方面的内容：一是介绍视觉文化理论与社会理论，探讨视觉表意的技巧和方式，人们解读和体验视觉符号的过程，以及观看所造成的社会关系；二是简单介绍上述几种媒介出现、发展和成为重要传播媒介的文化史与社会史，重点在于这些媒介社会使用模式形成的过程和原因，考察技术与社会相互塑造和影响的方式；三是通过案例讨论影像与社会意识之间的互动，考察影像如何维护、质疑或改变现代社会中的一些重要观念，比如性别观念、有关自然和科学的观念、民族意识、阶层意识等。三个方面相互穿插，构成对影像与社会之间关系的批判性考察。

教材：本课程没有单一的教材，每节课都会有相应的阅读材料，推荐阅读的书单在最后列出。

英文简介（Course Description）：
Image making is an important communicative function in modern societies. With the development of media technologies, visual images are increasingly central to how we represent, make meaning and communicate in the modern world around us. The relationship between new ways of seeing brought about by new visual technologies and the cultural experience of modernity has long been documented by western social theories. This course hopes to explore how visual media played a part in the modernizing experience of 20th and 21st Century China. Chinese modernity is unique in the way that it is less influenced by industrialism than by political and cultural radicalism and dependent ideological conditions. Visual technologies such as printing, photography, film and television, along with other communication media, are important means through which modern ways of life are imagined and modern values mediated. The arrangement of the course is mainly

thematic with strong historical perspective. Three themes, namely otherness and identity formation, gender visions and representations and urban/rural imaginations, will be the focus of our discussions in this course. The three themes are closely related to issues of modernity and modern imaginations, and visual cultures associated with the republic, socialist, radical and post socialist eras of Chinese history are discussed in terms of their mediation and creation of Chinese modernity in both its uniqueness and connection to a global pattern.

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课程号（Course Number）： 02036010
课程名称（Course Title）：民俗学专题/ The Forms of Folklore
开课院系（School/Department）： 教务部
学分（Credits）： 3
授课教师（Faculty）： 程梦稷

先修课程（Prerequisites）： 无。

中文简介：
本课程探讨民俗学中的基础概念和分类，在涵盖口头、物质及行为等民俗学主要类别的基础上，以中国民间文学为中心，在每一类别中，将深入研究叙事（神话、传说、民间故事）和诗歌形式（民歌、史诗、叙事歌谣）等子类型。通过案例分析、课堂汇报以及实地考察，学生将基本掌握民俗学的主要知识，为民俗学与民间文学研究提供一个生动的入门途径。

英文简介（Course Description）：
This course explores the foundational concepts and categories in folklore studies, with a particular focus on traditional Chinese folk culture. Topics include the three primary categories of folklore: verbal folklore (folk literature), material folklore, and customary folklore. Within these categories, we will examine subtypes such as narratives (myths, legends, folktales) and poetic forms (songs, epics, ballads). Through case studies, interactive classroom discussions, and field trips, students will gain both a theoretical understanding of folklore studies and firsthand exposure to Chinese folk culture. This course seeks to balance academic rigor with cultural enrichment, providing an engaging introduction to both folklore studies and Chinese heritage.

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课程号（Course Number）： 02231290
课程名称（Course Title）：博物馆发展史/History of Museums
开课院系（School/Department）： 教务部
学分（Credits）： 2

授课教师（Faculty）：黎婉欣

先修课程（Prerequisites）：无

中文简介：
本课程教授博物馆于不同区域的建设历史，让学生思考当代博物馆的功能和当代社会对博物馆的要求。博物馆一直被视为现代社会的产物，于过去三百年历经重大变化：由欧洲贵族的百宝箱演变成为公民共享的博物馆；由高等教育场所演变为老少咸宜的参观场地； 再由传授知识的学习中心演变互动交流的城市地标。以上变化直接影响了博物馆的收藏方向、展览内容、陈设布局、推广和营销等各方面发展。课程由早年欧洲地区设立博物馆的背景开始，随之走入美洲、亚洲等国家。

英文简介（Course Description）：
This course is delivering an overview of the developments of museums from the first establishments in the 18th and 19th centuries, regional developments in Asia during the 20th century, and some major breakthroughs under the impacts of modern and contemporary arts. While museums were used to be the cabinets of curiosities of the European elite, they are now the shared, public space of civilians; while they were high-end education venues, they are now the leisurely quarters of everyone; while they were centres of academic knowledge, they ought to play the role as urban landmarks too. This course discusses the backgrounds and reasons for all these changes, taking students to look into cases from Europe to the America and Asia.

-End-

课程号（Course Number）：02335200
课程名称（Course Title）：庄子哲学/Philosophy of Zhuang Zi
开课院系（School/Department）：教务部
学分（Credits）：2
授课教师（Faculty）：郑开

先修课程（Prerequisites）：

中文简介：
庄子是中国哲学史上最有特色的人物之一。其独特的关于人生和世界的思考，以及生活方式的选择，在中国历史上留下了浓墨重彩的一笔。本课程以庄子内七篇为主，将系统介绍庄子以生命为中心的哲学思考，其中包括对世界、权力、财富、功名等的理解。在讲授的过程中，希望借助于庄子和儒家对比的方式，展现两种不同的生命形象。

英文简介（Course Description）：
Zhuangzi is one of the most distinctive figures in history of Chinese philosophy. His

special meditation on life, world, and choice on lifestyle, has produced a deep and long-reaching influence on Chinese history. This course will focus on the inner chapter of zhuangzi, and attempts to introduce the philosophical thoughts centering on life systematically, including the understanding of world, power, wealth and fame. During the course, I hope to show you two kinds of different life forms by means of comparing Zhuangzi and Confucianism..

-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.

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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, heateroskedasticity 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.

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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.

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课程号（Course Number）：02535620
课程名称（Course Title）：新结构经济学国际实践/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”建设面临新的挑战和机遇，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.

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课程号（Course Number）： 03132200
课程名称（Course Title）：社会人类学与中国研究/Social Anthropology and China Studies
开课院系（School/Department）： 教务部
学分（Credits）： 2
授课教师（Faculty）： 张力生

先修课程（Prerequisites）： 无

中文简介：
社会人类学原是与体质人类学、考古人类学、语言人类学并列的人类学的四大分科之一。二十世纪初，它逐步从广义的人类学中分离出来，成为一门社会人文学科。“社会人类学”一词首先出现于英国。由马林诺夫斯基和布朗创立的功能主义及结构-功能主义，构成了英国现代社会人类学的方法论基础。其特色在于对小型社区或族群的透视以及对文化的整体观和制度关系分析的强调。二十世纪初，吴文藻、费孝通等先贤将功能主义的社会人类学思想与方法引入中国，开启了中国社会的人类学研究。本门课程围绕中国人类学研究的经典议题与文本展开阅读，带领学生理解社会人类学中国研究的发展脉络，基本关怀以及最新发展。

英文简介（Course Description）：
Social anthropology initially emerged as one of the four major sub-disciplines of

anthropology, alongside physical anthropology, archaeology, and linguistic anthropology. During the early 20th century, it progressively diverged from the broader anthropological framework to establish itself as an independent social scientific discipline. Functionalism and structural-functionalism, as developed by Bronis? aw Malinowski and A. R. Radcliffe-Brown, have constituted the theoretical and methodological foundation of modern British social anthropology. Its distinctive characteristics include an emphasis on the micro-level analysis of small-scale communities or ethnic groups, as well as a holistic approach to culture and an analytical focus on the interrelationships of social institutions.

In the early twentieth century, functionalist perspectives and methodologies of social anthropology were introduced to China by pioneering sociologists and anthropologists including Wu Wenzao and Fei Xiaotong, thereby laying the groundwork for anthropological research on Chinese society. This course is designed to revolve around the classic themes and seminal texts of Chinese anthropological research, guiding students to comprehend the developmental trajectory, core concerns, and contemporary advancements of social anthropology in China.

-End-

课程号（Course Number）：03132210
课程名称（Course Title）：边疆与边界：社会学的视角与方法/Frontiers and Boundaries in Sociological Approaches
开课院系（School/Department）：教务部
学分（Credits）：1
授课教师（Faculty）：田耕

先修课程（Prerequisites）：无先修课程

中文简介：
中国的边疆社会与政治秩序的内与外密切相关，边疆“社会”在多大程度上成立，亦影响着我们从学理上认识中国社会和中华民族的内涵。理解边疆社会的社会学的视野和方法,是政治社会学和历史社会学的重要视角。疆域（斯土），人民（斯民）是看待边疆社会的基本要素，而广义上的“边政”则是将二者结合起来的方式。同时，边疆是边界的一种特殊形式，而社会学对边界的形成和社会过程已经有了重要的概念体系和研究传统，从社会学研究边界的视角和方法出发，怎么理解中国的边疆社会，是本课程的第二个重点。

英文简介（Course Description）：
Frontier has a variety of meanings ranging from a far-flung edge of a state, an outlying community loosely aligning with the center, to peripheral human groups nevertheless much into their own cultural traditions. Frontiers however have played a central role in shaping human histories and thus created histories of their own. This course hopes

to shed light on a few general inquiries about frontier and frontierness by engaging some critical events, junctures, movements and human groups on Chinese frontiers mostly in the 19th and 20th centuries. First, we will have historical tours to some major frontier zones in China particularly back to the late imperial period. Where are the Chinese frontier societies? What does the frontier society mean to the gigantic spatial and cultural entity called China? Who are the social actors in the frontier societies, how do they identity themselves and how do they interact with people outside frontier? Second, this course will introduce some of the critical intellectual frames the social scientific scholarship has raised to probe the frontier. What intellectual tools are at our disposal to conceptualize the frontier? In what processual dynamics does a frontier society change? What functions does a frontier serve and to which interest? What relational format characterizes the interactions between states, regions, political powers or cultural fabrications that are conjoined by a frontier? This course goes between regional studies and conceptual framings and we encourage students to go comparative either across frontier zones in China and/or between different cognitive frameworks about frontier.

-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，本门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）：03835710
课程名称（Course Title）：语言、文化与交际/Language, Culture and Communication
开课院系（School/Department）：教务部
学分（Credits）：2
授课教师（Faculty）：郑萱

先修课程（Prerequisites）：无

中文简介：
本课程旨在通过介绍和讨论语言、文化和跨文化交际的一些主要议题，提高学生在交际中的跨文化意识，发展跨文化交际能力。课程的前一半侧重于对比汉、英语在不同层面的差异和对交际的影响；后一半侧重于讨论对于这些差异的超越。

英文简介（Course Description）：
Through discussion of selected topics on language, culture, and intercultural communication, this course aims to help students cultivate cross-cultural awareness, and develop intercultural communication competence. The first half of the course focuses on differences between Chinese and English at various levels, and their influence on communication. The second half discusses the transcendence of such differences.

-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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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
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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:

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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）：04450001
课程名称（Course Title）：乐韵中国：流行歌曲与社会变迁/Grooving China: Pop Music and Social Transformation
开课院系（School/Department）：教务部
学分（Credits）：3

授课教师（Faculty）：赵昀晖

先修课程（Prerequisites）：无

中文简介：
本课程是为北大暑期学校来华的各国留学生开设的了解中国的通识课。
“新文化运动”至今，中国在政治经济、文化思潮、社会热点、思维方式等各方面，历经百年变迁。在此过程中，中文流行歌曲以其兼容并包的词曲风格、丰富各异的演唱方式，紧密地与变迁中的中国相关，广泛地反映了当时人们的风貌心理、社会的热点焦点，鲜明而深刻地展现了时代走向。
本课程从纵向的历史发展以及其中的几个发展节点着手，兼顾不同时代的流行歌曲介绍，以及同一曲风的风格发展透视，内容包括时代背景介绍、歌曲聆听欣赏、歌词文本分析、社会问题链接等，旨在使学生通过本门课程的学习，既能从流行歌曲中放松身心，更能了解百年中国的基本发展和变迁，以及相关的社会问题。

英文简介（Course Description）：
This general-education course welcomes PKU’s Summer School international students who are eager to explore and understand China better.

Since the New Culture Movement, China has undergone over a hundred years of change ranging from politics, economy, culture, to social issues and ways of thinking. Throughout this process, Chinese pop songs have been closely associated with the country’s changes thanks to the genre’s all-inclusive lyrical and musical styles, as well as its shifting presentations. Meanwhile, by reflecting the spirit and the hot topics of the times, pop music also seemed to suggest the direction in which the specific eras were going.

In this course we will trace the historical development of pop music in China and zero in on selected focal points. Students will be introduced to pop songs from various periods and trained to analyze the development of particular styles. We will explore the historical backgrounds, listen to a selection of iconic pop songs, analyze the text of the lyrics, and connect the songs to relevant social issues. Through the lens of pop music, we seek to understand the fundamental changes and development that have taken place in China’s recent past in a relatively relaxed manner.

-End-

课程号（Course Number）：04833360
课程名称（Course Title）：情感智能机器人引论/Introduction to Affective Intelligent Robotics
开课院系（School/Department）：教务部
学分（Credits）：2

授课教师（Faculty）：王韬

先修课程（Prerequisites）：

中文简介：

强人工智能是人们长久以来孜孜以求的一个理想，智能机器人是这个理想的实物寄托，以各种形态出现在众多科幻文学、影视作品当中。智能机器人能够理解人类语言，听懂人的心声；能够看着人的眼睛，认知周围的环境；有感觉，更有反应和思考，还能够通过学习获得经验和成长。而情感能力对于智能机器人至关重要。如果缺乏情感理解和表达的能力，将很难使智能机器人与人自然交互，更不能主动识别人的负面情感并做出积极反应。

本门课程对情感智能机器人加以介绍，展示机器人的运动、感知、控制、智能以及体系结构，讲解情感的作用、表达、识别、调节与心理学基础，讨论机器人通过各种感知方式对人类的情感识别模型，最后探索机器人的情感调节方法。本门课程还包含搭建机器人的实践环节。

本门课程是面向全校本科生开设的一门引论课程，并不涉及复杂的数学、物理推理与运算，也不要求过高的计算机程序设计技能。主要探讨情感智能机器人的概念、原理、模型、实现，希望选课同学能够对情感智能机器人有全面及较深入的了解，为进一步学习或进行相关应用打下坚实的基础。

本门课程采用平时课堂成绩与期末论文相结合的方式进行考核。

英文简介（Course Description）：

Strong artificial intelligence is one of the long-cherished dream of human being, while intelligent robots are its ideal physical sustenance, which have been presented in various forms in a number of science fiction literatures and films. Intelligent robots can understand the human language, understand the human voice; can look at people's eyes, cognize around the environment; can feel, react and think; and can also gain experience and grow through learning. The ability of handling affect is critical to intelligent robots. When lack of understanding and express affect, it will be difficult for intelligent robots to do natural interaction with human beings, difficult to take the initiative to identify people's negative emotions and make a positive response.

This course conducts an introduction to affective intelligent robotics, introduces the movement, perception, control, intelligence and architecture of the robot, explains the role, expression, identification, adjustment of the affect, and the corresponding psychology foundation. This course also discusses the recognition models of human affect through various sensing methods, and finally explores the ways of doing affect adjustment. This course also includes the practice of building robots.

This course is an introductory course for undergraduate students. It does not involve complex mathematics, physical reasoning and computing, and does not require too much computer programming skills. This course mainly discusses the concept, principle, model and realization of affective intelligent robotics. Hope that the involved students can have a comprehensive and deep understanding of affective intelligent robotics, lay a solid foundation for further study or related applications.

The course employs a combination of the usual classroom performance and the grade of the essay to evaluate the final score of a student.

-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，世界各国的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）： 12730020
课程名称（Course Title）：变化中的地球/Our Changing Planet
开课院系（School/Department）： 教务部
学分（Credits）： 2
授课教师（Faculty）： 郑玫

先修课程（Prerequisites）： 无

中文简介：
《变化中的地球》课程是环境科学本科专业的一门专业基础选修课程，介绍地球系统中的多个圈层、各圈层间的相互作用及人类活动对地球系统的扰动和影响尤其是气候变化。认识地球系统中的大气圈、岩石圈和水圈的组成、形成和演化、圈层随时间的演化、主要元素如碳的生物地球化学循环，重点介绍由于人类活动引发的环境问题，包括温室气体和气候变化、光化学烟雾、臭氧层破坏和酸雨。该课程旨在培养学生掌握大气、海洋和地球科学的基础理论和了解各圈层的共同特点和相互关系，并学习采用多学科方法分析地球系统中的各种过程，从而对人类活动对地球系统的影响有全面的认识。本课程包括环境科学中的一些基本概念，包括大气和海水的组成和垂直结构、大气和海水运动的基本形态、海气相互作用及过去、现在和未来的气候变化。讲授范围从城市与区域人为源污染物的组成、来源和传输到全球性环境问题。该课程不仅详细介绍地球系统及人类活动对该系统的影响，同时也介绍一些当前大气科学和海洋学中的重要科研成果。

英文简介（Course Description）：
Environmental Science is fundamentally an interdisciplinary science which involves interactions between atmosphere, hydrosphere and lithosphere. The course 《Our Changing Planet》is an elective course, offered for undergraduate students in environmental science major. This course introduces different spheres in the earth system, the interactions between them and perturbation and impacts due to human activities on the earth system such as climate change. The students will learn the composition, formation and evolution of the atmosphere, lithosphere and hydrosphere in the earth system, understand interactions between them, evolution with time, biogeochemical cycles of major elements such as carbon. Major environmental issues such as greenhouse gases and climate change, photochemical smog, ozone depletion and acid rain are the focuses. This course aims to teach students fundamental knowledge of atmosphere, ocean and earth sciences, common characteristics in each sphere and their interactions, the interdisciplinary approaches needed to understand processes in the earth system, thus the students can acquire a complete picture of the impact on the earth system due to

human activities. This course introduces basic concepts in environmental science, including the composition and vertical structure of atmosphere and ocean, atmospheric and ocean circulation, air-sea exchange and climate change of the past, current, and future. It does not only provide information of the earth system and human impacts, but also the most recent research findings in atmospheric and oceanic sciences.

-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）： 30330500
课程名称（Course Title）：ACM/ICPC竞赛训练/ACM/ICPC Training
开课院系（School/Department）： 教务部
学分（Credits）： 2
授课教师（Faculty）： 郭炜

先修课程（Prerequisites）： C++，数据结构；或有中学生信息奥赛经历

中文简介：
北京大学的ACM国际大学生程序设计竞赛(ACM/ICPC)水平在国内处于领先地位，自2005年起每年均参加总决赛，并获得过总决赛金牌、银牌。北京大学的Online Judge --- POJ 更是国内最有影响力的ACM/ICPC竞赛训练平台，在国际上也有较高知名度和较多用户。
北京大学ACM/ICPC竞赛队精英汇集，大多数队员都曾在全国中学生信息学奥赛上取得过优异成绩，或在ACM/ICPC亚洲区预选赛中获得过金奖。北京大学ACM/ICPC竞赛队通过多年的积累，已经形成了一套行之有效的系统训练方法。
本课程为准备参加ACM/ICPC的同学设置，一定会对提高参训学校的竞赛成绩大有帮助。

英文简介（Course Description）：
Peking University always ranks high in the ACM/ICPC contests, no matter in the Asia regional contests or world finals. Since 2005, Peking University advanced to the world finals every year, and got many medals. The program online judge system of Peking University, is one of e most famous ACM/ICPC training website in China, and it also acquires fame and many users abroad. Most members of the ACM/ICPC team of Peking University have got great achievement in the National Olympiad in Informatics, or golden medal in ACM/ICPC Asia regional contests. Through years of work, we have find a systematic and efficient way of training. This course is set for ones who are going to attend the ACM/ICPC contests, and it will definitely make great help to improve their contest ranks.

-End-

课程号（Course Number）： 30340052
课程名称（Course Title）：中国传统健身、饮食与养生/Chinese Traditional Body Exercise, Diet and Health Preservation
开课院系（School/Department）： 教务部
学分（Credits）： 2
授课教师（Faculty）： 王东敏

先修课程（Prerequisites）： No pre-requisites to enroll in this course.
All undergraduates might be the Target audience.

中文简介：
本课程为中文授课。

英文简介（Course Description）：
It is said there are three things interest westerners about china: food, health preservation, and finance. Those students who enroll in the course of Chinese Traditional Body Exercise, Diet and Health preservation will have chance to experience two of the three hot topics and know how the ancient Chinese people maintain their health via simple but effective body exercise and balance diet. The course will not only introduce and practice the most popular body exercises, such as Taiji, Baduanjin, Wuqinxi, but also the most mystery one, which is frequently appeared in the most popular martial arts novels, such as Yijingjing and Qigong. All the exercises will be demonstrated by the teaching assistants who are experts in that filed. The course will also apply the foundations of Traditional Chinese Medicine, such as basic conceptions, theories, and principles of Health preservation in TCM and reveal Chinese diet, which sometime play important roles as medicine and why. As one of the complementary common methods of health preservation, the acupuncture, moxibustion, and massage will be introduced as well. The course designer wish finally western undergraduates understand the associations between exercise, diet and health in very Chinese health preservation's way.

-End-

课程号（Course Number）： 30340056
课程名称（Course Title）：镜中观花：中国人的价值观/FLOWER IN THE MIRROR: THE CHINESE VALUES
开课院系（School/Department）： 教务部
学分（Credits）： 3
授课教师（Faculty）： 韩金鹏

先修课程（Prerequisites）：

中文简介：
本课程为英文授课。

英文简介（Course Description）：
The present course helps investigate the realm of values in which a Chinese approaches his family, love life, friends, education, career, and serious issues like nature, space,

time, and inevitably, life and death. Texts cover a wide range of sources including classical and contemporary literature, social wisdoms and folklores, ancient philosophies and latest twitter discussions. In passing, there will also be substantial discussions on how a Chinese waves his lances of values and gropes for his identity in the postmodern maelstrom of information, globalization and political economy. It thus aims at a comprehensive understanding of Chinese values in the comparative light of tradition and individuality and of the Chinese in the eyes of other peoples and cultures and vice versa.

-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）： 30340096
课程名称（Course Title）：中国传统表演艺术/Arts of Chinese Traditional Performance
开课院系（School/Department）： 教务部
学分（Credits）： 3
授课教师（Faculty）： 张新亚(校外)

先修课程(Prerequisites)： Students who are interested in performing arts, both oriental and western, and their cultural and technical background, as well as Chinese language.

中文简介：
本课程为英文授课。

英文简介（Course Description）：
There are many forms of Chinese traditional performance. The styles vary significantly because of the various cultural background and dialect. In this course, a selection of Chinese performing art forms, such as Peking opera and other Chinese traditional operas, Quyi, Chinese folk songs, Chinese traditional music, Chinese dance, are introduced. They represent the philosophy and aesthetics of Chinese people. These Chinese art forms are also compared with western styles. Their cultural background and

technical background (e.g., linguistic and acoustical aspects) are discussed.

-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）：30340106
课程名称(Course Title)：中国现当代小说选读/Selected Readings of Chinese Modern Fiction
开课院系（School/Department）：教务部
学分（Credits）：2
授课教师（Faculty）：金理(校外)

先修课程（Prerequisites）：无

中文简介：
本课程围绕现当代文学史上的青年形象与青春想象、选择现具有代表性的中短篇小说作品进行深入讲解，训练读者对文学语言和文学美感的感受能力和把握能力，理解作品中隐藏的多层次的内涵，进而发现人性的丰富。也使学生对中国当代社会的文学、文化与社会发展，以及文学与社会的复杂互动有切实理解。领会文学在今天现实境遇中的意义。

英文简介（Course Description）：
This course focuses on the youthful imagination in the history of modern and contemporary literature, and selects representative fiction to provide an in-depth explanation, training the reader's ability to perceive literary language and literary beauty, to

understand the multi-layered connotations hidden in the works, and thus to discover the richness of human nature. It also provides students with a practical understanding of the literary, cultural and social development of contemporary Chinese society, and the complex interaction between literature and society. Appreciate the significance of literature in today's situation.

-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)

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.

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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

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.

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课程号（Course Number）： E1273914
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）： 3
授课教师（Faculty）： 戴瀚程

先修课程（Prerequisites）： 无

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.

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课程号（Course Number）： 02930242
课程名称(Course Title)：国际组织法导论/An Introduction to International Organizations Law
开课院系（School/Department）： 教务部
学分（Credits）： 3
授课教师（Faculty）： 陈一峰 长聘副教授

先修课程（Prerequisites）：无

中文简介：
在过去超过四分之三个世纪里，基于条约成立、拥有国家成员资格和独立法律人格的国际组织已成为全球事务中不可或缺的组成部分。无论是联合国维护和平与安全的使命，世界银行和国际货币基金组织推动可持续发展的努力，还是世界卫生组织促进科技合作的实践，国际组织在现代多边关系中都发挥着关键作用。

本暑期课程系统讲解国际组织得以创立并规范其运作的法律体系，旨在帮助学生掌握国际组织法的基本原理。课程采用"讲座+专题研讨"的复合教学模式，共设置10个教学单元，包含前往驻华国际组织总部的实地考察环节，并将以学生专题汇报作为课程成果展示。

英文简介（Course Description）：
For over three-quarters of a century, international organizations—possessing a treaty-basis, State-membership and an autonomous legal personality—have been integral to global affairs. Whether it is the pursuit of peace and security by the United Nations, or sustainable economic development by The World Bank and International Monetary Fund, or scientific and technical cooperation, by the World Health Organization, international organizations are essential to modern multilateral relations.

This summer course introduces the law both enabling and governing every international organization. The objective is to possess students of a foundational understanding of international organizations law. It comprises 10 sessions, combining lecture- and structured seminar-based formats, together with a planned field trip to a Beijing-headquartered international organization and student presentations.

-End-

课程号（Course Number）：02930239
课程名称(Course Title)：中国刑事司法体系导论/Introduction to Chinese Criminal Justice System
开课院系（School/Department）：教务部
学分（Credits）：3
授课教师（Faculty）：江溯 长聘副教授

先修课程（Prerequisites）：无

中文简介：
本课程将帮助学生从历史、政治和法律的角度理解中国的刑事司法。对于每个部分，将给出一个简短的介绍，以提供相关领域的大局，同时选择重要的主题进行进一步讨论。本课程不仅旨在提供“纸面上的中国刑事司法”，而且旨在提供“行动中的中国刑事司法”。由于刑事司法在中国的法律制度中发挥着极其重要的作用，对中国刑事司法的理解将有助于学生更好地了解

中国的法律、政治和社会。

英文简介（Course Description）：
This Course will help the students to understand Chinese criminal justice from historical, political and legal perspectives. For each section, a brief introduction will be given to provide a big picture of the relevant field, at the same time important topics will be selected for further discussions. This course is aimed at providing not only the “Chinese criminal justice in book” but “Chinese criminal justice in action”. Since criminal justice plays an extremely important role in Chinese legal system, the understanding of Chinese criminal justice will help the students to have better understanding of Chinese law, politics and society.

-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 marking, 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.

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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）： 贾积有

先修课程（Prerequisites）： 计算机基础

中文简介：
最近十年，以大语言模型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 course 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. Two successful research projects of applying AI in education, an intelligent computer supported language learning system CSIEC and

the Mathematics Intelligent Assessment and Tutoring System (MIATS), will be presented.

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课程号（Course Number）：06733070
课程名称（Course Title）：数字媒体创意设计/Digital Media Creative Design
开课院系（School/Department）：教育学院/Graduate School of Education
学分（Credits）：2
授课教师（Faculty）：赵国栋

先修课程（Prerequisites）：这是北京大学教育学院和北京大学浙江信息技术高等研究院联合开设的面向各专业本科生的一门公共选修课，属于数字影像设计与编辑入门课程。如图1所示，内容主要包括三大模块：媒体可视化设计与传播理论（Media Visual Design & Communication），数字影像（Digital Audio & Video）摄制与后期处理，及AIGC影像生成式设计。本课程的主要教学目标，是尝试在当前的数智化转型（DX）和人工智能技术（AI）突飞猛进的社会背景下，使各专业学生初步了解和掌握关于数智媒体设计和应用的前沿性知识与技能，创造性地将不同学科的专业知识与AIGC相互融合，塑造具备符合未来需求的敏锐数智化创新领军人才。
《数字媒体创意设计》学时分配：
一、媒体可视化设计与传播概述（面授：2学时）
二、计算摄影术与图像后期处理（在线直播+教室面授：12学时）
三、AIGC影像生成式设计（教室面授+在线直播：12学时）
四、数字影像实操练习（校园拍摄+AIGC工作站：6学时）
期末考试：数字媒体设计作品（设计时长为3-5分钟的视频汇报）

中文简介：
这是北京大学教育学院和北京大学浙江信息技术高等研究院联合开设的面向各专业本科生的一门公共选修课，属于数字影像设计与编辑入门课程。内容主要包括三大模块：媒体可视化设计与传播理论（Visual Design & Communication），数字影像（Digital Audio & Video）摄制与后期处理，及AIGC影像生成式设计。
本课程的主要教学目标是尝试在当前的数智化转型（DX）和人工智能技术（AI）突飞猛进的社会背景下，使各专业学生初步了解和掌握关于数智媒体设计和应用的前沿性知识与技能，创造性地将不同学科的专业知识与AIGC相互融合，塑造具备符合未来需求的敏锐数智化创新领军人才。
第一部分，课程将聚焦于媒体可视觉化设计、表达与传播相关的技术与方法，主要包括：数字照片处理（以Adobe Photoshop为例）、数字图像设计（以Stable Diffusion WebUI和ComfyUI为例）和数字视频摄制（以OBS Studio为例）。从多个角度向学习者展示视听语言在数字影像设计中的理论与技术，如摄像的理论与流派，画面构图与叙事设计，光线布置与色彩表征，数字照片后期编辑处理的策略，以及数字影像的脚本设计与制作相关基础知识。
第二部分，将重点学习基于人工智能的可视化设计与制作技术（AIGC），强调以动手操作方式来亲身体验技术发展对媒体设计所带来的深远影响和巨大变化。该教学单元主要涉及到两类大语言模型：图像生成(Text2Image)和动作捕捉（MoCap）。学习者将有机会亲身体验照片拍摄、图像设计和微视频、视频直播等技术，亲自动手去体验AIGC数字媒体的设计、拍摄与制作等环

节，诸如：AI图像照片修复与上色、AI图像创意设计、AI图像风格化设计、图像生成动画和AI OBS动作捕捉生成式视频录制等。通过这种设计实践体验环节，将设计理论与AI技术实践相互结合为一体，促进从做中学，实现从体验中学。
《数字媒体创意设计》学时分配：
一、媒体可视化设计与传播概述（面授：2学时）
二、计算摄影术与图像后期处理（在线直播+教室面授：12学时）
三、AIGC影像生成式设计（教室面授+在线直播：12学时）
四、数字影像实操练习（校园拍摄+AIGC工作站：6学时）
期末考试：数字媒体设计作品（设计时长为3-5分钟的视频汇报）

英文简介（Course Description）：
Course Description

Creativity is the essence of design in any age. In the Internet age, digital creativity is especially regarded as the basis of design. Essentially, Creativity is a unique perspective, a novel idea, or a way of expressing emotion, and it is used to spread the bridge between concept and material. Good creativity can turn decadent into magic, and make it dull and shining. Especially in the Internet age with digital information surging, Digital creative can make the object highlight personality and advantages, flash the edge and strength, and reach the acme of perfection in various network information.

Actually, Creative design thinking is an important component of College Students' creative thinking training in the age of Internet. Globally, the demand for digital creative design has not only been limited to the previous graphic and visual designers, photographers and web designers, but is gradually expanding into the basic capabilities of various professions. Such as public relations, publishing, broadcasting, health care, education, government agencies, and manufacturing, more and more fields and industries are emphasizing digital creativity and communication technology, paying attention to sharing or presenting ideas in a visual way, and further creativity, design and production of rich digital products and experiences.

How to cultivate digital creative design ability? Just as Microsoft's epoch-making computer operating system, Windows has changed the way people work, Adobe has revolutionized the way individuals display ideas and process information in the Internet age. Through a variety of highly innovative applications, Adobe has brought about tremendous changes in the field of digital design. It can be said that Adobe is an amazing and fascinating symbol, representing innovation, originality, magic and omnipotence. Adobe has been seeking to express images, information and ideas in a better way, and has created an excellent example of innovative results in digital imaging, design and documentation. Therefore, Adobe is indispensable when we talking about digital creative.

This is a course aims to train, express and develop your digital creative ideas using

Adobe's electronic design tools. You will learn about the current mainstream digital design tools and development methods based on Adobe design tools in this course. The learning content will allow learners to draw pictures, edit videos, and make mobile content by using Adobe's most creative multiple design and development software. Learners can also incorporate creativity into tasks such as assignments and learning easily. The creative tools involved in this course include Photoshop, Premiere, After Effects, Audition, Acrobat, Presenter, Captivate and related auxiliary design software such as SAI, BIN, Easy Sketch, Crazy Talk and so on.

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课程号（Course Number）：06733100
课程名称（Course Title）：智能时代的英文学术写作/English Academic Writing with Generative 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）：范逸洲

先修课程（Prerequisites）：无

中文简介：
《智能时代的英文学术写作》课程简介

在人工智能（AI）重塑我们沟通、理解和创造的方式的时代，针对自然科学、人文学科和社会科学等各个领域的本科生设计的“应用人工智能的英文学术写作”课程，旨在不仅提高学生的英语交流技能，还将AI工具融入学术写作中，培养批判性思维和技术的道德应用。

1-课程目标

随着基于生成式AI语言工具的快速发展，学术写作面临着机遇与挑战。鉴于此，我们的课程旨在装备学生：
- 利用AI基语言工具发展批判性思维技能。
- 全面理解21世纪学术写作的基本原则。
- 学习如何阅读和撰写学术论文，关注结构、逻辑和风格。
- 以道德的方式促进生成式AI工具的使用。

2-先决条件/目标受众

这门课程面向全谱系的本科生，包括自然科学、人文科学和社会科学等领域。参加本课程的学生应具备基本的英语阅读、写作和听力理解能力。该课程适合那些旨在追求研究与开发职业生涯、并理解与世界各地科学家有效交流对于解决21世纪人类面临的重大挑战至关重要的学生。本课程适合那些有强烈兴趣不断提高英语交流技能以扩展知识视野的学生，并且相信英语仍然

是连接全球研究人员、跨越文化鸿沟构建桥梁的有力工具。

3-课程格式

本课程将采用翻转课堂的形式组织。学生首先通过完成在线单元（MOOC, Moodle）获得知识，然后参加面授教学课程，应用在线单元中获得的知识。本课设计适合任意数量的学生，从30-300不等。面授教学的详细组织将根据每学期注册的学生人数进行调整。

4-作业

作业的设计旨在作为学生写作技能改进的客观衡量标准。它将结合多个论文写作任务、知识测试和同行评审任务。

5-学生表现如何评估？

学生的表现将基于他们与课程材料的互动程度来评估，非常强调过程性的写作能力提升。

6-关于学术诚信的学生要求

本课程的主要目标之一是使学生能够发展与国际研究社区的道德准则一致的思维方式。我们鼓励学生建立坚实的道德行为和学术诚信基础，并在课程中遵守

英文简介（Course Description）：
Course Introduction: Applied Artificial Intelligence in English Academic Writing

In the era where Artificial Intelligence (AI) is reshaping the way we communicate, understand, and create, the "Applied Artificial Intelligence in English Academic Writing" course is designed for undergraduates across various fields such as natural sciences, humanities, and social sciences. The course aims not only to enhance students' English communication skills but also to integrate AI tools into academic writing, cultivating critical thinking and ethical application of technology.

1- Course Objectives

With the rapid development of generative AI-based language tools, academic writing is facing opportunities and challenges. In light of this, our course aims to equip students with:
- The ability to develop critical thinking skills using AI-based language tools.
- A comprehensive understanding of the fundamental principles of academic writing in the 21st century.
- The skills to read and write academic papers with a focus on structure, logic, and style.
- The promotion of the ethical use of generative AI tools.

2- Prerequisites/Target Audience

This course is designed for undergraduate students across the spectrum, including natural sciences, humanities, and social sciences. Students attending this course should possess basic English reading, writing, and listening comprehension abilities. The course is suitable for students aiming to pursue a career in research and development and who understand the importance of effective communication with scientists worldwide in addressing the major challenges humanity faces in the 21st century. This course is for students with a keen interest in continually improving their English communication skills to expand their intellectual horizon and who believe that English remains a powerful tool for connecting researchers globally and building bridges across cultural divides.

3- Course Format

The course will be organized in a flipped classroom format. Students will first acquire knowledge by completing online units (MOOC, Moodle) and then attend in-class tutorial sessions to apply the knowledge gained in the online units. This course design accommodates any number of students, ranging from 30-300. The detailed organization of in-class tutorials will be adjusted based on the number of students enrolled each semester.

4- Assignments

Assignments are designed as objective measures of students' improvement in their writing skills. They will combine multiple essay writing tasks, knowledge tests, and peer review tasks.

5- How Will Students' Performance Be Assessed?

Students' performance will be assessed based on their engagement with the course material, with a strong emphasis on the processual improvement of writing skills.

6- Requirements for Students Regarding Academic Integrity

One of the main objectives of this course is to enable students to develop a mindset that aligns with the ethical guidelines of the international research community. Students are encouraged to build a solid foundation of ethical behavior and academic integrity and to adhere to these principles throughout 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）： 于佳，张梓桐

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）： 02230992
课程名称（Course Title）：文物保护理论与实践/Theory and Practice of Cultural Heritage Conservation
开课院系（School/Department）： 考古文博学院/School of Archaeology and Museology
学分（Credits）： 1
授课教师（Faculty）： Renata F. Peters(校外)

先修课程（Prerequisites）： 无

中文简介：
课程旨在介绍西方世界的保护理论，包括保护的历史、背景、理论和相应的保护章程和准则，以及在不同背景下如何实践。(如博物馆和考古遗址）。

英文简介（Course Description）：
The objective is to introduce the theory of conservation in the Western world, including the history of conservation, its context, theories and corresponding conservation charters and guidelines, and how it is practiced in different contexts. (e.g., museums and archaeological sites)

-End-

课程号（Course Number）：04031313
课程名称（Course Title）：学年论文/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）：00136542
课程名称（Course Title）：人工智能通识：原理、算法及应用/Artificial Intelligence: principle, algorithm and application
开课院系（School/Department）：数学科学学院/School of Mathematical Sciences
学分（Credits）：1
授课教师（Faculty）：李若 教授 Professor，卢朓 副教授 Associate Professor

先修课程（Prerequisites）：无

中文简介：
在数字化与智能化交织的浪潮中，人工智能（AI）已成为驱动未来产业发展的核心引擎。本课程旨在为学生构建一个全面且深入的人工智能知识体系，并依托北京大学重庆大数据研究院，提供实践与学习平台。
北京大学重庆大数据研究院是重庆与北大共建的重庆市属事业单位。其研究聚焦于大数据智能化和数字化转型的共性关键技术研发及成果转移转化，通过创新“高校+校内组织机构+异地科研机构”三位一体的科技成果转化模式，已成功构建起从数学基础研究到实际应用的全链条创新体系。在这里，以基础软件为“根茎”，工业软件、行业应用软件为“枝干”的软件群正蓬勃发展，为产业升级与数字化转型提供坚实支撑。
本课程不仅涵盖 AI 的定义、起源、发展历程、核心技术及其在各领域的广泛应用，更将学生带入北京大学重庆大数据研究院的实地研学之中。学生将有机会亲身体验基于北太天元软件的实践操作，通过亲手修改代码、运行算法，深入探究人工智能算法背后的奥秘与实际应用效果。此外，学生还将了解研究院如何以科技企业为载体，以创新产品为抓手，推动产学研用金深度

融合，打造创新链、产业链、资金链、人才链协同发展的创新生态。
通过本课程的学习，学生将在实践中锻炼和提升对 AI 技术的直观理解与应用能力，为未来的学术研究与职业生涯奠定坚实的理论与实践基础。

英文简介（Course Description）：

Amidst the intertwined waves of digitization and intelligence, artificial intelligence (AI) has emerged as the core engine driving the future development of industries. This course aims to construct a comprehensive and in-depth knowledge system of AI for students and provide a practical and learning platform supported by the Peking University Chongqing Institute of Big Data.

The Peking University Chongqing Institute of Big Data is a Chongqing-municipality-affiliated public institution jointly established by Chongqing and Peking University. Its research focuses on the development of key generic technologies for big data intelligence and digital transformation, as well as the transfer and commercialization of research outcomes. Through innovating a "university + on-campus organizational unit + off-site research institute" trinity model for the commercialization of scientific and technological achievements, it has successfully built a full-chain innovation system spanning from basic mathematical research to practical applications. Here, a software cluster is thriving, with basic software serving as the "roots and stems," and industrial software and industry-specific application software as the "branches," providing solid support for industrial upgrading and digital transformation.

This course not only covers the definition, origin, development process, core technologies, and wide-ranging applications of AI across various fields but also immerses students in field studies at the Peking University Chongqing Institute of Big Data. Students will have the opportunity to personally experience practical operations based on the Baltamatica software, delving into the mysteries and practical application effects of AI algorithms by modifying code and running algorithms themselves. Furthermore, students will learn about how the institute leverages technology enterprises as carriers and innovative products as entry points to promote the deep integration of industry, academia, research, application, and finance, fostering a collaborative development ecosystem encompassing the innovation chain, industry chain, capital chain, and talent chain.

Through this course, students will hone and enhance their intuitive understanding and application capabilities of AI technologies through practice, laying a solid theoretical and practical foundation for their future academic research and career development.

-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）：刘爱玉，卢晖临

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脚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脚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）：林叶

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）： 03134010
课程名称（Course Title）：社会调查研究（一）/social research and fieldwork (1)
开课院系（School/Department）： 社会学系/Department of Sociology
学分（Credits）： 2
授课教师（Faculty）： 王利平，张展嘉

先修课程（Prerequisites）： 无

中文简介：
田野调查是社会科学学者了解社会现象、理解人类行为的重要方法，开展社会研究需要进入“田野”、扎根
基层、理解日常。本课程将带领学生开展深入的田野调查，研究议题将围绕社会发展与数字技术的交叉领域
展开，研究对象关注县城或农村居民。完成本课程后，学生将掌握如何开展田野调查、如何认识和理解研究
对象、如何整理和组织田野调查数据等社会调查技能

英文简介（Course Description）：
Conducting fieldwork is one of the most fundamental approaches for social science researchers
to grasp social phenomenon and understand human behaviours. Good practices of social science research require entering the field site, living within grassroots society, and
understanding daily and mundane lives of local communities. In this course, students will join
the two lecturers to conduct in-depth fieldwork research. Research topics will focus on the
intersected areas of social development and digital technologies. The course will focus specifically on rural or suburban areas in China. Students are expected to obtain skills such as
conducting fieldwork, interviewing key informants, collecting and organising fieldwork data.

-End-

课程号（Course Number）： 03134020
课程名称（Course Title）：社会调查研究（二）/Social Research and Fieldwork (2)
开课院系（School/Department）： 社会学系/Department of Sociology
学分（Credits）： 2
授课教师（Faculty）： 王利平

先修课程（Prerequisites）： 社会调查研究（一）

中文简介：
培养社会科学的素养需要方法训练和经验感提升并重，本课程将带领学生在田野调查（一）基础上展开进一步的田野工作，在教师的带领下、同学的互助下，结成研究小组，围绕一些议题，对基层社会尤其是县域社会展开调研，并在此过程中体验田野调查的过程，并领悟社会科学剖析现象与行为的方法。本课程期待学生在完成课程后能对田野调查有更深刻的理解，能产生对于某类社会问题的研究兴趣，并由动力沿着一定的问题脉络，在未来开展进一步的探索和研究。

英文简介（Course Description）：
The arts of the social sciences requires both method training and experience in the field. This course will lead students to participate in more advanced field work, form research groups under the guidance of the teachers, and cooperate with their fellow students, to conduct empirical research, especially in relation to the county-level society. It is expected the students can experience the process of field investigation and acquire the methods of analyzing social phenomena and behaviors. The students are expected to have a deeper understanding of field research, to develop an interest in certain social problems, and to be motivated to further explore certain puzzles after completing the course.

-End-

课程号（Course Number）： 01130160
课程名称（Course Title）：细胞生物学实验/Cell Biology Lab.
开课院系（School/Department）： 生命科学学院/College of Life Sciences
学分（Credits）： 1
授课教师（Faculty）： 张泉，辛广伟

先修课程（Prerequisites）： 先修 “细胞生物学“ 课程对理解实验中涉及到的细胞生命现象有帮助。

中文简介：
细胞生物学实验课程旨在通过精选的实验，培养学生掌握基本的实验操作技能和实验设计思路，

训练科学观察、数据记录与分析能力，帮助学生学会使用理论知识分析问题、解决问题。通过该课程，学生将初步掌握细胞生物学研究的基本思维方式和重要实验技术，为后续科学研究奠定必要的知识与技能基础。

英文简介（Course Description）：

The Cell Biology Laboratory course aims to develop students' fundamental experimental skills and experimental design strategies through a selection of carefully chosen experiments. It trains students in scientific observation, data recording, and analysis, and helps them apply theoretical knowledge to analyze and solve problems. Through this course, students will gain a foundational understanding of the key thought processes and essential experimental techniques in cell biology research, providing them with the necessary knowledge and skills for future scientific studies.

-End-

课程号（Course Number）：01130210
课程名称（Course Title）：遗传学实验/Genetics Lab
开课院系（School/Department）：生命科学学院/College of Life Sciences
学分（Credits）：1
授课教师（Faculty）：辛广伟，张泉

先修课程（Prerequisites）：遗传学，分子生物学

中文简介：

本课程紧密配合遗传学课程而设置，通过从实验设计和理念的讲授，到实际的遗传实验操作，加深对课堂讲授内容的理解，拓展思维的空间。

我们的遗传学实验内容将细胞染色体水平、基因组水平，功能基因组水平的实验有机的融合在一起。不仅包括经典的验证性实验，而且引入了与科研密切相关的现代基因功能研究的实验。首先通过展示和讲授不同的模式动物（如果蝇、线虫和斑马鱼），让学生认识到模式动物的在遗传性研究中的重要性。通过染色体制备、观察和引入果蝇平衡染色体的使用，让学生真正从实际使用的层面了解染色体是基因的载体，认识基因是如何通过染色体传递遗传信息的。经典的正向遗传学验证性实验，我们将通过一个杂交实验，就可同时分析和验证遗传学的三大定律（基因的自由组合，分离定律，连锁定律）、伴性遗传，同时分析基因间的遗传距离；基因的互作则通过玉米的遗传实验实现。现代后基因组时代反向遗传学的实验，则强调基因突变对研究基因功能的重要性，通过功能丧失（loss of function）或者获得(gain of function)的基本策略实现基因突变后研究目的基因表型的目的，“Gal4/UAS系统（被称为果蝇遗传学研究的瑞士军刀）诱导癌基因在果蝇中异位表达”可以实现功能获得的目的，而 “利用Flp/FRT 系统构建果蝇的Mosiac克隆 (获得纯合突变克隆)”可以实现功能丧失的目的。同时传授这些系统的灵活和组合使用可以达到的不同目的，进而让学生自己设计实验，从而实现利用遗传性理念和工具在科学研究中研究基因功能的目的。

英文简介（Course Description）：

This course focuses on the genetics Lab from concept to design and practical procedure, closely related to the theory course in order to deepen and extend the knowlege and dimension of thinking.
The content of this genetics Lab combined chromosome, molecular and functional experiments together, including classical genetic crosses and crosses of gene function used in modern scientific researches. Firstly, we introduce C. elegans, Drosophila and zebrafish as model animals to emphasize their importance and respective characters in the research of genetics. Then through the preparation and analysis of polytene chromosome, observation of chromosomes of different species and identification of phenotypes of balancers and mutants in fly, let students to know the genes on the chromosome and how the genetic message pass through chromosomes. We design a single cross in which the classical genetic laws of segregation, recombination, distance among genes and sexual linkage can be tested and verified at the same time. The complex network of interaction that give rise to multifactorial traits can be tested and analyzed by counting the number of different phenotypes of core kernels. For the gene functional research in the term of reverse genetics, we emphasize the significance of the mutation through the strategy of loss or gain of function. The ectopic expression of oncogene in fly eye using Gal4/UAS system (A Fly Geneticist’s Swiss Army Knife) and making Mosiac clones by FLP/FRT system are our extended experiments to achieve the goal of gain or loss of function. We also let students to design their own experiment using these versatile tools to study the function of genes. All these experiments are overlapped during the period of one semester.

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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）： 李晟，饶广远，李大建，龙玉，贺新强，孟世勇，王戎疆

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.

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课程号（Course Number）：01132677
课程名称（Course Title）：分子生物学实验/Molecular Biology Experiments
开课院系（School/Department）：生命科学学院/College of Life Sciences
学分（Credits）：1
授课教师（Faculty）：毕群，刘旖璇

先修课程（Prerequisites）：分子生物学理论课，学习实验课相关原理。 微生物学理论课，学习微生物操作的原理和方法。

中文简介：
本课程旨在培训学生分子生物学基本的实验方法和技术。在实验过程中使学生掌握基础分子生物学实验的基本原理和结果分析方法，并得到相应的实验技能和操作训练。课程主要包括以下几个部分：

1. 质粒DNA的分离纯化。
2. DNA的限制性内切酶消化。
3. DNA琼脂糖凝胶电泳。
4. 利用PCR技术扩增GFP基因。
5. Gibson assembly构建pET28a-EGFP表达载体。
6. 阳性克隆的筛选及外源基因在原核细胞中的诱导表达。
7. 唾液细胞总RNA提取及逆转录合成cDNA。
8. 夜猫子基因推定及表达检测。
9. 转录因子HetR的凝胶阻滞分析。

英文简介（Course Description）：
The present course is an experimental teaching course opened for students majoring in biosciences. The technology commonly used in molecular biology will be taught in this course. Through several experiments, the students will not only learn the related technology, but also will realize how to use it in the practice of scientific research. This course includes following parts：

1. Extraction and purification of plasmid DNA.
2. Digestion of plasmid DNA with restriction endonucleases.
3. Agarose gel electrophoresis of DNA.
4. In vitro amplification of GFP gene by the polymerase chain reaction.
5. Construction of expression vector through Gibson assembly.
6. Identification of positive colonies and induction expression of foreign gene in prokaryotic cell.
7. Extraction of total RNA from salivary cells and its reverse transcription.
8. Detection of gene related to Delayed Sleep Phase Disorder (DSPD).
9. Electrophoretic mobility shift assay of transcription factor HetR.

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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，曲一铭

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.

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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.

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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，龙漫远(校外)，钱紘(校外)

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的9次方（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的3次方（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.

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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）：王戎疆，贺新强

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和操作方法，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）：王戎疆，李晟，饶广远，李大建，顾红雅，龙玉，贺新强，孟世勇

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。

英文简介（Course Description）：
Field Practice of Biology is focused on plants, animals, their relationships and relationships between environment and organisms. In this course, the students will learn the basic identification of plants and animals, ecological methods to study the plant and animal life in the wild environment such as natural reserves. Through studying the course, the students will improve the understanding of general biological concepts, and learn the methods of designing experiments, inquiring data, and analyzing data, which will confer the basis for biological study 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）：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）：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。

英文简介（Course Description）：
Field Practice of Biology is focused on plants, animals, their relationships and relationships between environment and organisms. In this course, the students will learn the basic identification of plants and animals, ecological methods to study the plant and animal life in the wild environment such as natural reserves. Through studying the course, the students will improve the understanding of general biological concepts, and learn the methods of designing experiments, inquiring data, and analyzing data, which will confer the basis for biological study 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）：顾红雅，饶广远，贺新强，李大建，王戎疆，龙玉 讲师 Lecturer，孟世勇，李晟

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。

英文简介（Course Description）：
Field Practice of Biology is focused on plants, animals, their relationships and relationships between environment and organisms. In this course, the students will learn the basic identification of plants and animals, ecological methods to study the plant and animal life in the wild environment such as natural reserves. Through studying the course, the students will improve the understanding of general biological concepts, and learn the methods of designing experiments, inquiring data, and analyzing data, which will confer the basis for biological study in future.

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课程号（Course Number）：01138495
课程名称(Course Title):生命科学前沿实验模块课/Cutting Edge Laboratory Research Module in Life Sciences
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，梁希同，李美琪，辛广伟，周辰

先修课程（Prerequisites）：普通生物学实验、生物化学实验、分子生物学实验

中文简介：
生命科学前沿实验模块课是一门以本科生自主探究为中心的生命科学创新实验课程。本课程由多位PI导师主持设计，将前沿的生物学科学问题和实验方法设计为适合本科生科研训练的创新实验课题。学生在PI导师与实验教学中心老师共同指导下，将所学专业知识技能综合应用于开放性的生物学创新实验课题，接受全面的科学训练过程，培养提升学生的文献查阅、实验设计与实验操作、科学沟通与写作等综合科研能力，使学生得到充分的科研思维、科研技能与自主科研能力的训练。

英文简介（Course Description）：
Cutting Edge Laboratory Research Module in Life Sciences is an innovative laboratory course in life sciences aimed at undergraduate independent inquiry. Designed and led by multiple PI (Principal Investigator) mentors, this course translates cutting-edge biological scientific problems and experimental methods into innovative experimental projects suitable for undergraduate research training. Under the joint direction of PI mentors and teachers from the experimental teaching center, students integrate their professional knowledge and skills to tackle open-ended biological research projects, undergoing a comprehensive scientific training process. The course aims to foster and enhance students' comprehensive scientific research capabilities, including literature review, experimental design and operation, as well as scientific communication and

writing, thus providing students with thorough training in scientific thinking, research skills, and independent research abilities.

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课程号（Course Number）：01138495
课程名称(Course Title):生命科学前沿实验模块课/Cutting Edge Laboratory Research Module in Life Sciences
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，李毓龙，冯杰思，辛广伟，朱文苑

先修课程（Prerequisites）：普通生物学实验、生物化学实验、分子生物学实验

中文简介：
生命科学前沿实验模块课是一门以本科生自主探究为中心的生命科学创新实验课程。本课程由多位PI导师主持设计，将前沿的生物学科学问题和实验方法设计为适合本科生科研训练的创新实验课题。学生在PI导师与实验教学中心老师共同指导下，将所学专业知识技能综合应用于开放性的生物学创新实验课题，接受全面的科学训练过程，培养提升学生的文献查阅、实验设计与实验操作、科学沟通与写作等综合科研能力，使学生得到充分的科研思维、科研技能与自主科研能力的训练。

英文简介（Course Description）：
Cutting Edge Laboratory Research Module in Life Sciences is an innovative laboratory course in life sciences aimed at undergraduate independent inquiry. Designed and led by multiple PI (Principal Investigator) mentors, this course translates cutting-edge biological scientific problems and experimental methods into innovative experimental projects suitable for undergraduate research training. Under the joint direction of PI mentors and teachers from the experimental teaching center, students integrate their professional knowledge and skills to tackle open-ended biological research projects, undergoing a comprehensive scientific training process. The course aims to foster and enhance students' comprehensive scientific research capabilities, including literature review, experimental design and operation, as well as scientific communication and writing, thus providing students with thorough training in scientific thinking, research skills, and independent research abilities.

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课程号（Course Number）：01139385
课程名称（Course Title）：生物信息产业实践/Practice in the Bioinformatics Industry
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）：刘凤麟，谢夏青，刘超，李程，高歌，孔雷，张泽民

先修课程（Prerequisites）：无

中文简介：
本课程是一门旨在将理论知识与产业实践紧密结合的综合性课程。通过本课程的学习，学生将了解生物信息学相关企业的运作机制、发展动态以及技术应用，掌握产业实践的基本方法和技能。
通过案例分析、实地考察和项目实践等多种教学方式，学生将有机会了解产业的前沿技术和市场趋势，培养解决实际问题的能力。此外，课程还将注重培养学生的团队协作和创新精神。通过小组讨论、团队项目等形式，学生将学会与他人合作，共同解决实践中遇到的问题，培养创新思维和实践能力。
通过本课程的学习，学生将加深对生物信息学相关产业的理解，提升自己在产业实践中的竞争力，为未来的职业发展奠定坚实的基础。

英文简介（Course Description）：
This comprehensive course aims to tightly integrate theoretical knowledge with industrial practice. Through studying this course, students will gain an understanding of the operational mechanisms, development trends, and technological applications of enterprises, and master the basic methods and skills of industrial practice.
Utilizing various teaching methods such as case studies, field trips, and project practices, students will have the opportunity to learn about cutting-edge industrial technologies and market trends, and cultivate their ability to solve practical problems.
Additionally, the course will emphasize fostering students' team collaboration and innovative spirit. Through group discussions, team projects, and other formats, students will learn to collaborate with others, jointly solve problems encountered in practice, and cultivate innovative thinking and practical abilities.
Through studying this course, students will deepen their understanding of the bioinformatics-related industry, enhance their competitiveness in industrial practice, and lay a solid foundation for their future career development.

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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.

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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）： 李昕豫(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.

This course is designed to educate 24-form Taichiquan, a simplified of Taichiquan which consists of 24 unique movements. Based on simple and normative movements, 24-form Taichiquan is easy to learn and students can quickly learn and experience the characteristics and essences of Taichiquan as a kind of philosophy, exercise and sports. Moreover, learning and practicing 24-form Taichiquan is beneficial to student’s bones, muscles, internal organs and spirit. So, this course is a good choice not only for credits

but also for student’s health.

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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）：

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.

This course is designed to educate 24-form Taichiquan, a simplified of Taichiquan which consists of 24 unique movements. Based on simple and normative movements, 24-form Taichiquan is easy to learn and students can quickly learn and experience the characteristics and essences of Taichiquan as a kind of philosophy, exercise and sports. Moreover, learning and practicing 24-form Taichiquan is beneficial to student's bones, muscles, internal organs and spirit. So, this course is a good choice not only for credits but also for student's health.

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课程号（Course Number）：04130630
课程名称（Course Title）：汉字太极与养生课/Taiji and Health Preserving through Chinese Characters
开课院系（School/Department）：体育教研部/Section of Physical Culture
学分（Credits）：1
授课教师（Faculty）：李朝斌

先修课程（Prerequisites）：无

中文简介：
一、课程介绍
1.汉字太极是以太极为理念，根据人体硬件的升、降、开、合，软件气机的升降和意识的收放，以阴阳变换为总纲。达到人体身、心、灵、慧动态平衡，眼、耳、鼻、舌、身、意六根归一的和谐状态。汉字太极把文化、修身、音乐、创新融为一体，是度文化性、哲学性、艺术性的传统体育项目。
本课程是言传和身教，言传；每堂课前25分钟读经典著作，教材；大学、道德经、金刚经、心经等经典。诵读后学生针对每一章讨论5分钟，要求；学生在讨论的过程中要结合自己的学习和生活。教师提问5分钟，教师提出问题全班同学共同讨论。身教；教师教授躯体间架结构的同教师给每位同学捏架子。教授汉字太极的基本动作(手、眼、身、法、步，基本笔划，简单的汉字，

汉字的基本笔划和手、眼、身、法、步的配合)。
通过汉字太极与养生课的学习；使学生了解言传和身教之间的关系，了解民族传统体育运动，使学生德、智、体、美有机的结合，达到修身养性之目的。
通过汉字太极与养生课的学习；使学生树立正确的人生观和价值观，把握自己生命的状态，使学生觉知常无欲以观其妙；常有欲以观其徼在生活当中的应用。
通过汉字太极与养生的学习；能够提高学生身体的灵活性、协调性、柔韧性达到增进健康、激发活力、愉悦身心的目的。
通过汉字太极与养生的学习；使学生能够根据自己情绪的变化每天书写不同的汉字，练习不同的套路。使每个人都能结合自己的生理状况和特点找到自己的运动形式。
2、安全注意事项
（1）穿宽松的服装（如；传统的养生服装或运动服）
（2）要求同学要注意自身的生理安全，如有胸闷、心慌、头痛等生理等状况，向老师提出。老师根据情况安排。
二、课程任务
1、培养学生终身体育意识，掌握民族传统体育的理念和汉字文化体系。
2、身体力行掌握和做到准确、实效、功夫上身。
3、提高自身修养，完善自身人格。

英文简介（Course Description）：
The Syllabus for Chinese Character Tai Chi（Hanzi Taiji） and Health- preserving Course

1. Introduction of the course
i. The Chinese character Tai Chi is based on Taiji, according to the rise, fall, opening and closing of human body hardware, the fluctuation of software breath and the retraction of consciousness, with Yin and Yang transformation as the general principles. To achieve the dynamic balance of body, heart, spirit and wisdom, and achieve the eye, ear, nose, tongue, body, consciousness six normalization harmonious state. Chinese character Tai Chi combines culture, self-cultivation, music and innovation. It is a traditional sport with cultural, philosophical and artistic characteristics. This course consists of teaching by word and example. Teaching by words: read classics 25 minutes before each class. Textbooks: classics, such as The Great Learning, Tao Te Ching, Diamond Sutra, and Heart Sutra. After reading, students discuss 5 minutes for each chapter. Students should combine their study and life in the process of discussion. Teachers ask questions for 5 minutes, and the whole students discuss them together. Teaching by examples: The teacher teaches the structure of the body, and the teacher kneads skeleton for each student. Teaching the basic movements of Chinese character Tai Chi (hand, eye, body, method, step, basic stroke, simple Chinese character, basic strokes of Chinese characters and coordination of hand, eye, body, method and step). Through the study of Chinese character Tai Chi and the course of health care, the students can understand the relationship between the words and examples, understand the traditional sports, and combine the students' morality, intelligence, body and beauty, so as to achieve the purpose of cultivation.
Through the study of Chinese character Tai Chi and the course of health care, the students can set up a correct outlook on life and values and grasp the state of their own life,

enable students to realize that "without desire to observe things to small to micro, with desire to observe their laws and purposes" and its application in life.
Through the study of Chinese character Tai Chi and the course of health care, it can improve the flexibility, coordination and suppleness of the students' body, and achieve the purpose of improving health, stimulating vitality and pleasing the body and mind.
Through the study of Chinese character Tai Chi and the course of health care, students can write different Chinese characters and practice different routines every day according to their own emotional changes. So that everyone can combine their own physiological conditions and characteristics to find their own form of movement.

ii. Safety Precautions

a) Wear loose clothing (e.g., traditional health clothes or sportswear)

b) Students are required to pay attention to their physical safety, such as chest tightness, panic, headache and other physiological conditions. The teacher arranges it according to the situation

2. Curriculum Task

i. Cultivate students' sense of lifelong physical education, grasp the concept of traditional national sports and culture system of Chinese characters

ii. Practice and grasp accurately and effectively.

iii. Improve self-cultivation and improve personal personality

-End-

课程号（Course Number）： 04130630

课程名称（Course Title）：汉字太极与养生课/Taiji and Health Preserving through Chinese Characters

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

学分（Credits）： 1

授课教师（Faculty）： 李朝斌

先修课程（Prerequisites）： 无

中文简介：

一、课程介绍

1.汉字太极是以太极为理念，根据人体硬件的升、降、开、合，软件气机的升降和意识的收放，以阴阳变换为总纲。达到人体身、心、灵、慧动态平衡，眼、耳、鼻、舌、身、意六根归一的和谐状态。汉字太极把文化、修身、音乐、创新融为一体，是度文化性、哲学性、艺术性的传统体育项目。

本课程是言传和身教，言传；每堂课前25分钟读经典著作，教材；大学、道德经、金刚经、心经等经典。诵读后学生针对每一章讨论5分钟，要求；学生在讨论的过程中要结合自己的学习和生活。教师提问5分钟，教师提出问题全班同学共同讨论。身教；教师教授躯体间架结构的同教师给每位同学捏架子。教授汉字太极的基本动作(手、眼、身、法、步，基本笔划，简单的汉字，

汉字的基本笔划和手、眼、身、法、步的配合)。
通过汉字太极与养生课的学习；使学生了解言传和身教之间的关系，了解民族传统体育运动，使学生德、智、体、美有机的结合，达到修身养性之目的。
通过汉字太极与养生课的学习；使学生树立正确的人生观和价值观，把握自己生命的状态，使学生觉知常无欲以观其妙；常有欲以观其徼在生活当中的应用。
通过汉字太极与养生的学习；能够提高学生身体的灵活性、协调性、柔韧性达到增进健康、激发活力、愉悦身心的目的。
通过汉字太极与养生的学习；使学生能够根据自己情绪的变化每天书写不同的汉字，练习不同的套路。使每个人都能结合自己的生理状况和特点找到自己的运动形式。
2、安全注意事项
（1）穿宽松的服装（如；传统的养生服装或运动服）
（2）要求同学要注意自身的生理安全，如有胸闷、心慌、头痛等生理等状况，向老师提出。老师根据情况安排。
二、课程任务
1、培养学生终身体育意识，掌握民族传统体育的理念和汉字文化体系。
2、身体力行掌握和做到准确、实效、功夫上身。
3、提高自身修养，完善自身人格。

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1. Introduction of the course
i. The Chinese character Tai Chi is based on Taiji, according to the rise, fall, opening and closing of human body hardware, the fluctuation of software breath and the retraction of consciousness, with Yin and Yang transformation as the general principles. To achieve the dynamic balance of body, heart, spirit and wisdom, and achieve the eye, ear, nose, tongue, body, consciousness six normalization harmonious state. Chinese character Tai Chi combines culture, self-cultivation, music and innovation. It is a traditional sport with cultural, philosophical and artistic characteristics. This course consists of teaching by word and example. Teaching by words: read classics 25 minutes before each class. Textbooks: classics, such as The Great Learning, Tao Te Ching, Diamond Sutra, and Heart Sutra. After reading, students discuss 5 minutes for each chapter. Students should combine their study and life in the process of discussion. Teachers ask questions for 5 minutes, and the whole students discuss them together. Teaching by examples: The teacher teaches the structure of the body, and the teacher kneads skeleton for each student. Teaching the basic movements of Chinese character Tai Chi (hand, eye, body, method, step, basic stroke, simple Chinese character, basic strokes of Chinese characters and coordination of hand, eye, body, method and step). Through the study of Chinese character Tai Chi and the course of health care, the students can understand the relationship between the words and examples, understand the traditional sports, and combine the students' morality, intelligence, body and beauty, so as to achieve the purpose of cultivation.
Through the study of Chinese character Tai Chi and the course of health care, the students can set up a correct outlook on life and values and grasp the state of their own life,

enable students to realize that "without desire to observe things to small to micro, with desire to observe their laws and purposes" and its application in life.
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Through the study of Chinese character Tai Chi and the course of health care, students can write different Chinese characters and practice different routines every day according to their own emotional changes. So that everyone can combine their own physiological conditions and characteristics to find their own form of movement.

ii. Safety Precautions

a) Wear loose clothing (e.g., traditional health clothes or sportswear)

b) Students are required to pay attention to their physical safety, such as chest tightness, panic, headache and other physiological conditions. The teacher arranges it according to the situation

2. Curriculum Task

i. Cultivate students' sense of lifelong physical education, grasp the concept of traditional national sports and culture system of Chinese characters

ii. Practice and grasp accurately and effectively.

iii. Improve self-cultivation and improve personal personality

-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.

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课程号（Course Number）： 00432216
课程名称（Course Title）：量子力学（Ⅱ）/Quantum Mechanics (ll)
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 intruduction. The main topics further cover several other basics in the quantum chemstry, 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.

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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）：叶堉

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）：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不可或缺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）： 21100048

课程名称(Course Title)：经济学英文论文写作：从选题到发表/How to Publish in an Economics Journal: From Research Proposal to Publication

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）： 无

中文简介：

高年级本科生和研究生（甚至是青年学者）对经济学英文期刊论文的写作与发表都存在许多困惑。例如，什么样的选题值得研究、应该采用什么因果识别方法、如何构建理论模型来指导实证分析、什么水平的论文可以得到发表、应该投稿到哪个级别的国际期刊、得到审稿意见后如何修改等。大家普遍存在这些困惑并不奇怪，因为在大部分高校的培养计划中，论文写作与发表并不是一门核心课程。遗憾的是，由于相关知识的欠缺，许多优秀的学生和青年学者虽然掌握了较好的理论与实证研究方法，仍然经常在经济学英文期刊论文发表上遇到挫折。

本课程旨在为有志于从事高水平经济学实证研究的高年级本科生和研究生提供一个深入了解经济学英文期刊论文发表的机会。通过本课程32个学时的学习，学生将深入了解经济学英文论文从选题到发表的全过程。值得强调的是，本门课程并不是简单的介绍论文写作与发表的流程，而是深入剖析发表一篇高水平经济学英文论文所需要的全面技能，包括论文的选题技巧、文献综述方法、数据获取与分析方法、理论模型在实证文章中的应用、因果识别策略、英文写作技巧、投稿与修改技巧等。

英文简介（Course Description）：

Senior undergraduates and graduate students (even young scholars) have many confusions about the writing and publication of papers in English-language economics journals. For example, what topics should be researched, what causal identification methods should be used, how to build theoretical models to guide empirical analysis, what level of papers can be published, what level of international journals should be submitted to, and how to revise after receiving review comments Wait. It is not surprising that these confusions are common, because writing and publishing is not a core course in most colleges and universities. Unfortunately, due to the lack of relevant knowledge, many outstanding students and young scholars often encounter setbacks in publishing papers in English journals of economics, although they have mastered better theoretical and empirical research methods.

This course is designed to provide senior undergraduate and graduate students who are interested in conducting quality empirical research in economics with an in-depth understanding of the publication of papers in English-language journals of economics. Through the 32 hours of study in this course, students will have an in-depth understanding of the entire process of English economics papers from topic selection to publication. It is worth emphasizing that this course is not a simple introduction to the process of paper writing and publication, but an in-depth analysis of the comprehensive skills required to publish a high-level economics English paper, including paper topic selection skills, literature review methods, Data acquisition and analysis methods, application of theoretical models in empirical articles, causal identification strategies, English writing skills, manuscript submission and revision skills, etc.

-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)，陈雪梅，杨贞标(校外) ，陈浩东(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观遗传机制；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 Topis 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.

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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 affeced 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）： 21130016
课程名称（Course Title）：食物安全：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。食物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物安全讲起，在回忆历史上次大饥荒事件的基础上，梳理全球食物安全的演变过程。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物安全与消费。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）： 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.

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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.

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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.

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课程号（Course Number）： 21130022
课程名称（Course Title）：动物基因工程/Animal Genetic Engineering
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：
动物基因工程是应用DNA重组技术，在基因水平上改变生物遗传性，创造新生物物种通过工程化为人类提供有用产品及服务的技术；或指应用现代化的生物科学和遗传学技术对动物基因进行操纵或改造的科学工程。动物基因工程的核心技术是DNA的重组技术，还包括基因的表达技术，基因的突变技术，基因的导入技术等。

英文简介（Course Description）：
Animal genetic engineering is the application of DNA restructuring technology. The genetic level of genetic level is changed, creating new biological species providing useful products and services to humans through engineering; Scientific engineering that manipulates or transforms animal genes. The core technology of animal gene engineering is DNA's reorganization technology, including gene expression technology, gene mutation technology, and genetic introduction technology.

-End-

课程号（Course Number）： 21130024
课程名称（Course Title）：环境和发展经济学：理论和前沿/Environmental and Development Economics: Theory and Frontiers
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）： 赖汪洋

先修课程（Prerequisites）： 微观经济学（初级），计量经济学（初级）

中文简介：
本课程通过理论学习、案例分析和实证研究，探讨环境保护与经济发展之间的复杂关系。课程分为两大模块：模块一（第1-10周）聚焦环境与发展经济学的理论基础与热点问题；理论基础包括外部性、市场失灵、环境资源价值评估、环境政策工具等；热点问题包括环境与农业、健康、贸易、贫困、不平等等发展议题的相互关系。模块二（第11-16周）关注实证研究方法，探讨如何使用现代计量经济学的方法研究具体环境介质（如空气污染、水污染、生物多样性等）和社会发展的相互影响。

英文简介（Course Description）：
This course explores the complex relationship between environmental protection and economic development. The course is divided into two major modules: Module 1 (Weeks 1-10) focuses on the theoretical foundations and hot topics in environmental and development economics. The theoretical foundations include externalities, market failures, environmental resource valuation, and environmental policy tools. The hot topics cover the interrelationships between the environment and development issues such as agriculture, health, trade, poverty, and inequality. Module 2 (Weeks 11-16)

emphasizes empirical research methods, exploring how to use modern econometric techniques to study the interactions between environment (e.g., air pollution, water pollution, biodiversity) and development.

-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 Villege”, 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.

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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）： 01833970
课程名称（Course Title）：影视文化与批评/Cultural Critique in Film and Television
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）： 张慧瑜

先修课程（Prerequisites）： 无

中文简介：
本课程全面系统地教授影视文化与批评的理论及方法，结合中外电影史、电视史的案例，展现不同批评理论的脉络和实践方式，增强学生从影视理论的角度来研究影视文化现象，掌握影视批评的基本方法，学会写作影视批评文章。

英文简介（Course Description）：
This course is about theories and methodoliogies of film and television studies, combines Chinese film history , foreign film history and TV history together to show different ways of critics, helps students to research film and television culture in a theoretical perspective and write film critical articles.

-End-

课程号（Course Number）： 01834180
课程名称(Course Title):全球传播的新闻叙事及想象/Global Journalism in a World of Crisis
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）： 张展(校外) , 吴靖

先修课程（Prerequisites）：无

中文简介：

本课旨在跟进学生对国际新闻的认识，从策略叙事的角度解析新近发生的对地区或世界形势发展，以及全球新闻业产生较大影响的代表性案例，并探讨国内媒体对外传播中尚存的不足。希望本课可以激发学生的全球新闻想象，并形成学生对新媒体环境下国际新闻演变发展的批判思维，以及对中国媒体叙事策略的反观。

英文简介（Course Description）：

This class seeks to deepen students' understanding of narrative analysis, especially strategic narratives in the studies of international news and stimulates students imagi-nation of the Global Journalism. It focuses on the most critical cases that recently emerged and have significantly impacted the evolution of global journalism as well as China's (mediated) engagement with the world media environment.

The class is composed by four main parts:

Part I. Theoretic Understanding of Narratives in International News and Its De-velopment

This part provides a basic theoretic understanding of media narratives, strategic narra-tives, international news, and the importance of narrative analysis in media and com-munication studies. Responding to the changing news industry that is shaped by the development of digital media ecology, elements such as connectivity, interactivity, re-contextualization of media content, and the complex web of intercultural dynamics are taken into consideration to observe the new Web 2.0 storytelling.

Part II. Emerging Cases of the world of Crisis and the development in narratives

This part will discuss how the news narratives were developed into shaping this world filled with crisis. Emerging critical cases will include: Europe-China Relation after the Eurozone debt Crisis(2009-2014); Brexit and its impact on China(2015); Trump's Greater America and his full—range mediated Campaign(2016); and China's One Belt One Road Initiatives (2014-2017)

Part III. New Trends in Global Journalism: Crisis of Journalism or Challenges?

This part will introduce some of the most trendy phenomenons (e.g. data journalism, networked journalism, fake news) recently leaded the move of the global news indus-try in response to the development of the new media technology and the spread of so-cial network platforms. The discussion will not center "journalism" as business to dis-close the so-called "crisis", but center "journalism" as production of reliable infor-mation and analysis, that we just arrived at its golden time.

Part IV. Where and How is China's Voice?

This part will focus on the performance of Chinese media going out and whether the development of its strategic narratives fit or not yet fit into the global media environ-ment. The current limits of Chinese media narratives of going abroad, and the future improvement that should be learned and prepared for a better narrative version of China's stories will be inspired.

Given the significant challenges facing the World— America (e.g. uncertainties after Trump's presidency, anti-globalization movement); Europe (e.g., the potential for EU disintegration, the refugee crisis, and right-wing political movements) and China (the slowing growth in the economy, the looming environmental sustainability crisis, and the challenges to China's public diplomacy), this class unfolds at an especially im-portant time when protectionism, populism and anti-globalization are on the rise, and China's international role is winning more significance in face of the changing power structures of the global economy and political order. Students will be guided to look at these cases of emerging crisis through the lens of narrative analysis, and guided to un-derstand the challenges posed by new technologies for future news making. The pro-duction of news has already became a never-ending process and web of creating in-formation and fact-checking, we are all in such process and web now as different nodes in creating, transmitting, updating, or recreating narratives about ourselves and the world.

-End-

课程号（Course Number）：01834348
课程名称（Course Title）：健康传播研究：理论与方法/Health Communication Research: theories and Methodologies
开课院系（School/Department）：新闻与传播学院/School of Journalism and Communication
学分（Credits）：1
授课教师（Faculty）：许静

先修课程（Prerequisites）：无

中文简介：
健康传播作为传播学的一大分支，兴起于上世纪80年代的美国。经过40多年的发展，健康传播已经形成相对较多的研究成果和一定的理论方法。相比之下，国内的健康传播研究起步较晚。2016年，在韩启德院士的倡导下，北京大学与北大医学部创办了国内第一个健康传播专业硕士项目，在致力于跨学科的实践创新型人才培养的同时，也致力于吸收新理论和新方法，构建合理的知识体系，为研究型人才的培养创造条件。
本课程邀请海内外学者，以专题讲座的形式，着重介绍健康传播研究中较具前沿性和代表性的理论和方法，以促进中外学术交流，推动相关研究。

英文简介（Course Description）：
As a major branch of communication studies, health communication emerged in the United States in the 1980s. After more than 40 years of development, health communication has formed a relatively large number of research results and certain theoretical methods. In comparison, domestic health communication research started relatively late. In 2016, under the advocacy of Academician Qide Han, Peking University and Peking University Health Science Center established the first master's program in health communication

in China. While committed to cultivating interdisciplinary, practical, and innovative talents, it also aims to absorb new theories and methods, build a reasonable knowledge system, and create conditions for the cultivation of research talents.
This course invites scholars from home and abroad to focus on the introduction of cutting-edge and representative theories and methods in health communication research through thematic lectures, in order to promote academic exchanges between China and foreign countries and advance related research.

-End-

课程号（Course Number）：01834349
课程名称(Course Title):人工智能生成内容实务(AIGC)/Artificial Intelligence Generated Content
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：
使学生通过本课的学习，能够知晓AIGC的类型、特点和优势，了解AIGC产业的技术特征和发展趋势；能够掌握基于Stable Diffusion的ComfyUI环境的部署、配置和调试，学会ComfyUI模型、节点和插件的安装与设置，并通过其创作基本的工作流；能够熟练掌握文生文、文生图以及图生图等标准工作流的制作和使用；熟悉通过LoRA微调模型、ControlNet过程控制、IPAdapter风格引用以及InstantID角色学习等节点继承、引用和控制图像的生成和输出；知晓AnimateDiff动画生成工作流和SVD视频生成工作流的使用，并掌握大语言模型和文本生成语音在工作流中的调用。让学生具备综合运用不同类型和作用的节点创作工作流的能力，解决实际问题，为未来从事影视传媒等相关行业，进行内容生产和创作，积累相关知识、技巧和实践经验。

英文简介（Course Description）：
Through the study of this lesson, students will be able to understand the types, characteristics, and advantages of AIGC, as well as the technical features and development trends of the AIGC industry;Be able to master the deployment, configuration, and debugging of the ComfyUI environment based on Stable Diffusion, learn the installation and setup of ComfyUI models, nodes, and plugins, and create basic workflows through them;Be able to master the production and use of standard workflows such as text-to-text, text-to-image, and image-to-image;Be familiar with the generation and output of images through node inheritance, reference, and control using LoRA fine-tuning models, ControlNet process control, IPAdapter style references, and InstantID role learning;Knowledge of the use of AnimateDiff animation generation workflow and SVD video generation workflow, and master the use of large language models and text generation speech in workflows.To equip students with the ability to comprehensively use different

types and functions of nodes to create workflows, solve practical problems, and accumulate relevant knowledge, skills, and practical experience for future content production and creation in related industries such as film and television media.

-End-

课程号（Course Number）： 01630078
课程名称（Course Title）：性格分析与电影/Character analysis and film
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）： 钟杰

先修课程（Prerequisites）： 普通心理学或心理学概论

中文简介：
精神分析的理论与技术不仅应用于临床心理学中的研究与心理治疗过程，也对电影艺术领域有极大的影响。《性格分析与电影》这门课程旨在介绍精神分析理论中的性格分析原理，并结合被心理临床实践检验过的有关理论和电影剧本实例，探讨电影中的人物刻画的科学性规律。本课程不仅可以提高学生对电影的鉴赏能力，更重要的是提升对人类性格的兴趣与科学认识，更好的理解人性与我们的人生。

英文简介（Course Description）：
The theories and technologies of psychoanalysis are not only applied in the research and psychotherapy of clinical psychology, but also has a great impact on the field of film art. The course psychoanalysis and film characterization aims to introduce the principle of character analysis in psychoanalysis theory, and explore the scientific law of characterization in movies by combining relevant theories tested by psychological clinical practice and movie script examples. This course can not only improve students' ability to appreciate movies, but also enhance their interest in human characters and its scientific understanding, so as to better understand human nature and our lives.

-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）： 01630733
课程名称（Course Title）：神经美学/Neuroaesthetics
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、心理统计、实验心理学

中文简介：
神经美学是心理学、神经科学、艺术、建筑等多学科交叉融合而成的本世纪热门研究领域。本课程拟采用全英文教学方式， 围绕绘画、音乐、舞蹈、摄影、诗歌、建筑、景观等美学相关领域的理论及行为和神经科学研究，采用专题报告及讨论的方式，为学生提供科学与艺术相结合的广阔视角，使学生了解神经美学的发展历史及其前沿科学问题和研究方法，激发学生的好奇心和从事神经美学研究的科学热情，为其将来从事相关领域的前沿研究打下基础。

英文简介（Course Description）：
Neuroaesthetics is a new field of research emerging at the intersection of psychology, neuroscience, art and architecture etc., which attracts increasingly amount of attention nowadays. This course is an elective course designed for undergraduate students with various academic background, aiming to provide them with broad perspectives to bridge the gap between art and science, as well as providing advanced knowledge and research skills on art-related topics such as paintings, music, dancing, photography, poetry, architecture, landscaping and urban design.

-End-

课程号（Course Number）：01630751
课程名称（Course Title）：精神分析发展史/The History of Psychoanalysis
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）：钟杰

先修课程（Prerequisites）：无

中文简介：
《精神分析发展史》通过对精神分析理论发展的历史，帮助同学们理解人类对“自我”的认识历史。本课程将重点帮助学生对人类探索自我的历史过程进行梳理，激发学生的好奇心，通过以下理论的学习，深入理解人类认识自我过程中的发展的重点学派、流派和方法学差异，梳理处人类认识自我的理论发展的科学脉络和线索。本课程将对以下精神分析的核心流派进行学习：1）古典精神分析学派；2）自我心理学派（包括中间学派）；3）客体关系学派；4）自体心理学派。已经近年来这个学术领域的重要进展。

英文简介（Course Description）：
"The History of Psychoanalysis" is a history of the development of psychoanalytic theory to help students understand the history of human understanding of the "self". This course will focus on helping students sort out the historical process of human self-discovery,

stimulate students' curiosity, deeply understand the key schools, schools and methodological differences in the development of human self-understanding through the study of the following theories, and sort out the scientific context and clues of the theoretical development of human self-understanding. This course will examine the following core schools of psychoanalysis: 1) the classical school of psychoanalysis; 2) the school of Ego-psychology; 3) the object relational school; 4) self psychology. There have been important developments in this academic field in recent years.

-End-

课程号（Course Number）： 03033950
课程名称（Course Title）：信息伦理与隐私保护/Information Ethics and Privacy Protection
开课院系（School/Department）： 信息管理系/Department of Information Management
学分（Credits）： 2
授课教师（Faculty）： 夏汇川

先修课程（Prerequisites）： 无

中文简介：
信息伦理与隐私保护问题在大数据和智能时代日益凸显，比如数据标签与分类隐藏的种族歧视、数据画像对隐私的滥用、智能系统对人的替代与超越、政治中的选举操控、物联网涉及的隐私侵犯等。本门课程，将向学生们介绍各类信息伦理与隐私保护问题，并与学生们一起探讨这些问题可能带来的商业、政治、社会、与个人方面的影响。这门课旨在锻炼并提升学生独立思考能力，让学生们掌握一些批判性思维方法去考虑大数据与智能时代的信息伦理与隐私保护问题，使其学生们能够对这些问题进行一定深度上的思考与反省

英文简介（Course Description）：
Information ethics and privacy problems are becoming increasingly significant in the Big Data and Artificial Intelligence (AI) era, such as the racial discrimination hidden in the data categorization, privacy intrusion by data profilization, AI's substitution and superiority over humans, data manipulation in political campaigns, and privacy violations in the Internet of Things (IoT). This course aims to introduce various Information ethics problems to students and discuss with them about the impacts and consequences of these problems on commerce, politics, society, and personal lives. This course will strengthen students' independent thinking and train them with the methods to critique and reflect on information ethics in the Big Data and AI era

-End-

课程号（Course Number）： 03034020
课程名称（Course Title）：数据可视化导论/Introduction to 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）：先修《计算概论》的C层次及以上，或会使用Python。

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。与课号为03033940的《数据可视化》课程不同，本门课为公选课/通选课，讲授内容更为基础和通识，涉及代码要求将较低，与03033940不能互相替代。

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. This course is different from 03033940 "Data Visualization" course in that the former covers more fundamental and basic pieces of stuff while the latter is more technical-oriented.

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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.

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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，崔莹莹

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 systhesis 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 dely 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.

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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，叶乐

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 refered 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.

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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学生，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技术的兴趣。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：量子信息技术的概念和历史、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.

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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.

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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.

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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）：汝嘉耘

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，弥补理论基础知识课程与实际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.

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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，仉尚航

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，涵盖自主驾驶、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.

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课程号（Course Number）：04835490
课程名称（Course Title）：计算机科学高级专题/Advanced Topics in Computer Science
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）：周明辉，刘先华，边凯归，罗国杰，熊英飞，张大庆，施柏鑫，王乐业，吴文斐，仉尚航，吴垠鋆，孔雨晴，王鹤

先修课程（Prerequisites）：无。

中文简介：
本课程涉及计算机学科多个领域，由北大计算机学院的多位知名教授共同讲授，课程内容包括程序设计语言概览、开源数据分析、人工智能时代的数据库系统、计算摄像学、计算机视觉、普适计算和情境感知、人工智能系统实践、软硬件协同设计优化、现代自适应计算、网络计算与分布式系统、智能视频传输、同伴预测与群体智慧以及具身智能。课程理论和实践并重，将设置多个实验和操作环节。通过本课程的学习，学生基本掌握编程语言发展、量子算法、深度学习应用、操作系统原理、视频传输优化、计算摄像学基本概念、人工智能系统构建、智能机器人原理、软硬件设计协同优化、现代自适应计算、网络计算技术、开源数据分析以及普适计算的愿景和无线传感技术应用等计算学科各个领域的核心原理与方法，获得相关领域的实践经验，提高创新意识和实践能力。本课程的各部分内容概要介绍如下：

1. 程序设计语言概览（熊英飞）：介绍编程语言的发展、技术、未来方向。
2. 开源数据分析（周明辉）：讨论开源软件及其开发复杂性，以及挖掘数据揭示开源规律的量化分析技术和建立智能工具控制复杂系统及其开发的方法。
3. 人工智能时代的数据库系统（吴垠鋆）：本课程旨在帮助学生理解人工智能时代数据库系统面临的新挑战和机遇，了解数据库系统与人工智能技术的融合趋势，例如智能查询优化、自动数据管理等；掌握支持人工智能应用的新型数据库技术，例如向量数据库等。
4. 计算摄像学（施伯鑫）：介绍计算摄像学的基本概念、研究趋势、数字图像形成以及数码相机工作原理，并包含与成像基本原理相关的课程实践练习。
5. 计算机视觉（仉尚航）：介绍重要模型与算法，深度学习在其中的应用，以及面对开放环境的计算机视觉挑战，包括大量数据域偏移和新类别动态出现。
6. 普适计算和情境感知（张大庆）：介绍普适计算的愿景、历史、研究原则和情境感知计算，涵盖无线传感作为新的情境感知计算研究领域。
7. 人工智能系统实践（王乐业）：涵盖问题建模、数据获取、预处理、调参、部署和维护等技术，通过现实人工智能系统实例展示系统构建全流程所需的关键知识和工具。
8. 软硬件协同设计优化（刘先华）：探讨硬件和软件组件的协同设计原则，强调提高性能

和效率，学生将参与实践项目设计系统。

9. 现代自适应计算（罗国杰）：介绍现代自适应计算的芯片架构、编译技术、编程接口等，以及其作为系统原型研究平台的典型案例。

10. 网络计算与分布式系统（吴文斐）：介绍在网络计算的原语，降低网络流量和时延，提升系统效率的设计、管理、应用编程模型等。

11. 智能视频传输（边凯归）：探讨提升视频流服务与体验质量的关键技术，如预测视频内容流行度、网络带宽动态变化表征、对象检测等，为 5G 时代视频内容消费者提供更好服务。

12. 同伴预测与群体智慧（孔雨晴）：本章介绍同行预测机制，该机制无需依赖客观真实值，即可激励参与者真实报告意见。基于信息论框架，它适用于两人参与的有限任务场景，并通过报告匹配进行奖励。此外，我们将探讨该机制与从噪声标签数据中学习的关系。

13. 具身智能（王鹤）： 本课程聚焦具身智能这一通用人工智能发展的关键领域，探索通过物理交互实现智能行为的系统。内容涵盖足式机器人与灵巧手操作、多模态大模型应用（如 GPT-4V/4o）、以及从仿真到现实（Sim2Real）技术的核心任务与方法。学生将有机会在真实机器人上进行实验，深入理解具身智能在机器人控制与交互中的前沿挑战和应用。

英文简介（Course Description）：

Students will explore programming language development, traditional and quantum algorithm design, deep learning in computer vision, challenges in open-world vision, operating system principles, video streaming optimization, computational photography, AI system construction, embodied intelligence, hardware-software co-design, adaptive computing, network computing, open-source software complexities, and ubiquitous computing with wireless sensing applications. The course includes practical experiments to master core principles, enhance skills, and foster innovation.

1. An Overview of Programming Language Research – Introduction to the evolution, technologies, and future directions of programming languages, featuring related professors at Peking University.

2. Open-source Data Analytics – Examines open-source software development, quantitative analysis techniques for pattern recognition, and intelligent tools for complex system control via data mining.

3. Database Systems in the AI Era – Explores AI-driven database systems, including intelligent query optimization, automated data management, and emerging technologies like vector databases.

4. Computational Photography – Covers fundamental concepts, research trends, digital image formation, and digital camera principles, with hands-on exercises on imaging fundamentals.

5. Computer Vision in the Open World – Discusses key models, algorithms, and deep learning applications, addressing challenges such as domain shifts and new category emergence.

6. Ubiquitous Computing & Context Awareness – Examines the vision, history, and research in ubiquitous computing, with a focus on context-aware computing and wireless sensing applications.

7. AI System Practice – Covers problem modeling, data processing, tuning, deployment, and maintenance, demonstrating real-world AI systems and essential tools for system development.

8. Software/Hardware Co-design & Optimization – Explores principles of hardware-software collaboration, emphasizing performance and efficiency improvements through hands-on projects.
9. Modern Adaptive Computing – Introduces adaptive computing chip architectures, compilation techniques, and programming interfaces, illustrating real-world applications for system prototyping.
10. Accelerating Distributed Systems with In-Network Computing – Covers network computing principles to reduce traffic and latency, improving efficiency through advanced programming models.
11. Video Streaming with AI – Explores AI-enhanced video streaming, including content popularity prediction, bandwidth characterization, and object detection for optimized 5G services.
12. Peer Prediction & Wisdom of the Crowds – Introduces peer prediction mechanisms that incentivize truthful reporting without objective ground truth, connecting to learning from noisy labeled data.
13. Introduction to Embodied AI – Explores embodied intelligence, covering AI-physical world interaction, 3D vision, reinforcement learning, multimodal models (GPT-4V/4o), and real-robot Sim2Real challenges.

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课程号（Course Number）： 04835500
课程名称(Course Title)：大模型：从基础到前沿/Large Models: From fundamental to frontier
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）： 邓志鸿

先修课程（Prerequisites）： 高等数学（或者数学分析）、线性代数（或高等代数）、计算概论。

中文简介：
近年来，大模型的出现极大地促进了人工智能的发展，并把人工智能引入新的发展阶段，这其中人机对话系统ChatGPT是一个标志性事件。本课程涵盖了神经网络与深度学习基础、注意力机制与Transformer、语言大模型、视觉与多模态大模型、大模型微调技术、提示工程（Prompting）与上下文学习和课程项目实践等内容。在本课程中，学生将掌握最基本的基础理论知识，了解并接触最前沿的技术。通过课程内容讲授、课外作业和课程项目实践等多种教学方式相结合，学生能掌握设计和实现基于大模型的应用系统所必须的基本原理和技术，并对自己实现的系统有深入的理解，建立起对大模型全面而深入的认识。

英文简介（Course Description）：
In recent years, Large Models have emerged and greatly promoted the development of

Artificial Intelligence and bring Artificial Intelligence to a new stage, where ChatGPT is a milestone example. This course provides a thorough introduction to basic technologies and cutting-edge research in Large Models, including the fundamental of neural networks and deep learning, attention mechanism, Transformer, large language model, large vision and multimodal model, fine-tuning technology for Large Models, Prompting, In-Context Learning, and practice. Through lectures, assignments and a course project, students will develop systems based on Large Models and learn the necessary skills to design, implement, and understand their own models, and finally establish a comprehensive and in-depth understanding of large models.

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课程号（Course Number）： 04835520
课程名称（Course Title）：网络与系统安全实验/Network and System Security Experiments
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）： 王昭

先修课程（Prerequisites）： 计算概论、计算机网络、操作系统

中文简介：
随着网络技术的快速发展，网络安全问题成为影响国家安全、经济发展和社会稳定的严峻问题。网络安全是实践性很强的学科，为了增强计算机科学与技术”、“软件工程”等计算学科学生应对网络安全问题的实战能力，本课程通过计算机系统安全和网络安全的一系列实验，使学生能理解并应用计算机系统安全及网络安全方面的知识，掌握安全防护的基本技能，初步具备应对实际网络安全问题的能力。

本课程以实验课为主，上课时间安排在两周，一共10次课，每次4小时。
前8次为基础理论课与实践训练，最后2次为综合性实验。

英文简介（Course Description）：
With the rapid development of network technology, network security has become a serious issue that affects national security, economic development, and social stability. Network security is a highly practical discipline. In order to enhance the practical ability of students in computer science and technology, software engineering, and other computing disciplines to deal with network security issues, this course conducts a series of experiments on computer system security and network security, enabling students to understand and apply knowledge in computer system security and network security, master basic skills in security protection, and have a preliminary ability to deal with practical network security issues.
This course mainly focuses on experimental classes, with a two-week schedule. There

are a total of 10 classes, each lasting 4 hours.
The first 8 are basic theoretical courses and practical training, and the last 2 are comprehensive experiments.

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课程号（Course Number）： 04835550
课程名称（Course Title）：大模型：从基础到实战/Large Model: From Basic to Practice
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）： 黄铁军

先修课程（Prerequisites）： 计算机基础课程，Python语言，深度学习原理与Pytorch编程（可自学参考教材《深度学习原理与Pytorch实战》）

中文简介：
大模型已经成为人工智能发展的主流方向和驱动智能革命的主要力量。大模型是一个人工神经网络，实践表明，大模型规模达到500亿以上时，往往就能出现涌现现象，也就是出现了意料之外的新智能，而且随着模型规模和训练数据的增长，越来越多的能力涌现出来，成为实现各种智能的基础底座，有望成为实现通用人工智能的重要技术途径。
本课程从人工智能的历史介绍大模型的思想起源，从自然语言处理技术演进介绍语义理解的可能性，讲解训练大模型所需的基础知识，包括Transformer基础架构、大深度学习框架和大模型训练平台、常用数据集和数据处理技术、大模型评测方法等，进而进入实战阶段，结合正在进行的前沿科研介绍语言模型、视觉模型、多模态模型和具身模型的技术细节，最后介绍大模型的典型应用方案。

英文简介（Course Description）：
Large models have become the mainstream direction of artificial intelligence development and the main driving force for the intelligent revolution. A large model is an artificial neural network, and practice has shown that when the scale of a large model reaches over 50 billion, unexpected new intelligence can often emerge. With the growth of model size and training data, more and more capabilities emerge, becoming the foundation for realizing various intelligences and expected to become an important technological approach to achieving universal artificial intelligence.
This course introduces the origin of the idea of large models from the history of artificial intelligence, the evolution of natural language processing technology, and the possibility of semantic understanding. It explains the basic knowledge required to train large models, including Transformer infrastructure, deep learning frameworks and training platforms for large models, commonly used datasets and data processing techniques, and evaluation methods for large models. It then enters the practical stage and combines cutting-edge scientific research to introduce the technical details of

language models, visual models, multimodal models, and embodied models. Finally, it introduces typical application solutions for large models.

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课程号（Course Number）： 04835640
课程名称（Course Title）：深度学习中的高效计算方法/Efficient Computing of Deep Neural Networks
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）： 数据结构与算法，C/C++编程语言

中文简介：
深度神经网络（DNN）的高计算需求及其在云平台和物联网平台中的广泛应用，催生了专门用于加速DNN执行的硬件和软件技术的发展。本课程将介绍DNN高效应用和计算技术，将从DNN的概述开始，介绍支持DNN的各种框架和架构，以及在特定计算平台上的实现与优化方法。本课程邀请香港中文大学余备教授一起联合讲授。

英文简介（Course Description）：
The high computational demands of deep neural networks (DNNs) coupled with their pervasiveness across both cloud and IoT platforms have led to a rise in specialized hardware and software techniques to accelerate DNN executions. This course will present techniques that enable efficient applications and computing of DNNs. The course will start with an overview of DNNs, and then will introduce various frameworks and architectures that support DNNs, as well as the implementations and optimizations on some particular computing platforms. The course will be co-instructed by Prof. Bei Yu of the Chinese University of Hong Kong.

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课程号（Course Number）： 04835650
课程名称（Course Title）：脑机接口技术前沿与实践/Brain-Machine Interfaces and Bioelectronics: From Principles to Applications
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）： 郑雨晴

先修课程（Prerequisites）：无

中文简介：
本课程将通过理论讲授与案例分析，使学生对脑机接口的基础原理、硬件体系以及国内外的最新研究成果以及发展动态有深入的了解；在掌握常规侵入式与非侵入式神经电极设计及制造要点的同时，了解光遗传学、无创脑磁、无创超声等前沿方向在脑机接口中的应用探索；并通过对医疗、教育、娱乐领域典型场景的简要讨论，结合课程尾声对于技术伦理和产业趋势的思考，引导学生在科研与实践中保持多学科视角和责任意识。通过课堂讲解、案例研究和实验实践的教学模式，学生将有机会亲手制作传感器，体验脑机接口技术，真正理解生物电子技术的潜力。

英文简介（Course Description）：
This course provides students with an in-depth understanding of the fundamental principles and hardware architecture of brain-computer interfaces, as well as the latest research findings and developments both in China and abroad, through theoretical lectures and case analyses. While mastering key considerations in the design and fabrication of conventional invasive and non-invasive neural electrodes, students will also be introduced to cutting-edge directions such as optogenetics, non-invasive magnetoencephalography (MEG), and non-invasive ultrasound in brain-computer interface applications. In addition, by examining typical use cases in the medical, educational, and entertainment sectors—and concluding with reflections on technological ethics and industry trends—the course aims to guide students toward a multidisciplinary perspective and a strong sense of responsibility in both research and practice. Through a teaching model that integrates classroom instruction, case studies, and hands-on experiments, students will have the opportunity to fabricate sensors themselves, gain firsthand experience with brain-computer interface technology, and truly appreciate the potential of bioelectronics.

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课程号（Course Number）：04835660
课程名称（Course Title）：微纳加工与设计/Micro/Nano Fabrication
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）：王路达

先修课程（Prerequisites）：无

中文简介：
微纳加工是现代科学技术发展不可缺少的部分，它在微纳机电系统（MEMS/NEMS）、集成电路器件、微纳光学器件、生物医疗微器件等起到关键支撑作用。本课程将对工业界主流的加工手段做一个全面的介绍，同时也会涉及一些新材料（如二维材料）的微纳加工手段。课程会从加工

思路和原理出发由浅入深地对微纳加工进行介绍。对于没有集成电路工艺基础的同学，能够建立微纳加工的整个知识框架；对于学过集成电路工艺和微纳系统概论的同学，可以扩展知识面，特别是对新材料的微纳加工有深入的学习。

英文简介（Course Description）：
Micro/nano fabrication is crucial in science and technology. It plays a critical role in Micro/Nano-Electrical-Mechanical-Systems (MEMS/NEMS), integrated circuits devices, micro/nano optical devices, biomedical microdevices etc. In this course, I will give a comprehensive introduction of the mainstream fabrication in the industry. Meanwhile, I will dig into the ideas and principles of fabrication in a progressive manner. The students who do not have any background in the fabrication of integrated circuits will establish the knowledge framework of micro/nano fabrication; the students who have taken the courses related to integrated circuits and MEMS/NEMS will expand their knowledge, especially in the fabrication of new materials.

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课程号（Course Number）： 04835670
课程名称（Course Title）：三维视觉基础讲解与科研实践/Fundamentals of 3D Vision and Research Training
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）： 陈文拯

先修课程（Prerequisites）： 推荐先修完计算机视觉和可视计算两门课程。

中文简介：
本课程介绍三维视觉的基础知识，并为对三维视觉感兴趣的同学提供系统的科研训练。课程涵盖三维感知、三维重建和三维生成等核心内容，包括相机模型、三维重建方法（SFM、NeRF）、三维传感技术（LiDAR、结构光成像）以及大模型生成 3D 数据的最新进展。课程不仅通过理论讲解帮助学生掌握三维视觉的关键技术，还将结合实践训练和科研方法指导，培养学生的科研思维和创新能力。学生将在课程项目中夯实三维视觉基础，探索前沿研究问题，并通过学术讨论和实践训练，逐步提升从基础学习到科研探索的综合能力。

英文简介（Course Description）：
This course introduces fundamental concepts in 3D vision while providing systematic research training for students interested in the field. It covers key topics such as 3D perception, 3D reconstruction, and 3D generation, including camera models, reconstruction methods (SFM, NeRF), 3D sensing technologies (LiDAR, structured light imaging), and the latest advancements in large-model-generated 3D data.
The course not only helps students grasp essential 3D vision techniques through

theoretical lectures but also fosters research thinking and innovation through hands-on training and research methodology guidance. Through course projects, students will strengthen their understanding of 3D vision fundamentals, explore cutting-edge research topics, and enhance their ability to transition from foundational learning to independent research through academic discussions and practical training.

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课程号（Course Number）：04835700
课程名称（Course Title）：Python语言基础与人工智能应用/Python Programming and Artificial Intelligence Applications
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）：陈斌

先修课程（Prerequisites）：无

中文简介：
本课面向零编程基础的本科生，全面讲授Python语言基础，培养学生计算思维的能力，并讲解Python语言中经典的扩展模块和人工智能应用，让学生能用Python语言通过人工智能方法来解决各种常见问题。

本课内容包括编程与计算思维、Python语言历史、开发环境、程序设计风格和语言整体概览、大语言模型辅助程序设计、基本数据类型和容器类型、基本计算语句和控制流结构、函数定义与参数、面向对象编程、例外处理和生成器等高级语言特性、若干高级扩展模块的介绍与应用、图形界面编程和打包发布、深度学习的基本概念及应用、大语言模型智能体应用开发以及RAG技术构建个人知识库。

本课注重Python语言的实践与人工智能应用，在课程中穿插了生动案例和编程练习，引导学生积极建立计算思维和智能思维模式，通过程序算法解决问题来加深对编程语言的学习体会。并具备进一步运用人工智能方法在本学科领域进行创新实践的能力。

英文简介（Course Description）：
This course is designed for undergraduate students with no prior programming experience, offering a comprehensive introduction to the fundamentals of the Python language. It aims to cultivate students' computational thinking skills and covers classic extension modules and artificial intelligence applications within Python. By the end of the course, students will be able to use Python to solve various common problems through AI methods.

The course content includes programming and computational thinking, the history of Python, development environments, programming design styles, and an overview of the language. It also covers large language model-assisted programming, basic data types and container types, fundamental computational statements and control flow structures,

function definitions and parameters, object-oriented programming, advanced language features such as exception handling and generators, introductions and applications of several advanced extension modules, graphical interface programming and packaging, basic concepts and applications of deep learning, development of large language model intelligent agents, and the use of RAG technology to build personal knowledge bases.

The course emphasizes practical Python programming and AI applications, incorporating vivid case studies and programming exercises throughout. It guides students to actively develop computational and intelligent thinking patterns, deepening their understanding of programming languages through problem-solving with algorithms. Additionally, students will gain the ability to further apply AI methods for innovative practices within their own academic fields.

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课程号（Course Number）： 04835710
课程名称（Course Title）：光通信理论与仿真实验/Theory and Simulation Experiment of Optical Communication
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）： 张帆

先修课程（Prerequisites）： 《光学》、《通信原理》

中文简介：
本课程是光通信系统理论与上机实验课程，旨在通过基于锟森光系统仿真平台（KingSim OpticSystem）的实践操作，深化学生对光纤通信理论知识的理解，培养系统设计与仿真能力。课程涵盖光纤通信系统核心模块的搭建、参数优化及性能分析，包括光信号调制、光纤传输特性、非线性效应、相干接收等关键技术，为后续工程实践奠定基础。

英文简介（Course Description）：
This course is an experimental course on optical fiber communication systems. It aims to deepen students' understanding of optical fiber communication theory through hands-on practice using the KingSim OpticSystem simulation platform and to develop their system design and simulation capabilities. The course covers the construction of core modules in optical fiber communication systems, parameter optimization, and performance analysis, including key technologies such as optical signal modulation, fiber transmission characteristics, nonlinear effects, and coherent receiver. This lays a solid foundation for future engineering practice.

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课程号（Course Number）： 04835720
课程名称（Course Title）：机器学习理论中的连续时间扩散过程/Continuous-time diffusion processes in machine learning theory
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）： 王若松

先修课程（Prerequisites）： 高等数学(或数学分析)，线性代数(或高等代数)，概率统计，需具备机器学习基础知识。

中文简介：
连续时间扩散过程是一类重要的随机过程，在现代机器学习的模型和算法中起着重要作用。本课程聚焦连续时间扩散过程在机器学习中的理论与应用，面向具备概率论基础的本科生、研究生和科研人员。课程以典型问题为切入点，系统讲解核心算法设计与理论基础，延伸至该领域前沿进展。内容涵盖蒙特卡洛采样算法、扩散生成式模型、连续时间强化学习等专题，通过理论教学、文献研讨与课程报告相结合的方式，帮助学生掌握扩散过程的核心理论，了解领域最新动态，并完成基础的科研训练。

英文简介（Course Description）：
Continuous-time diffusion processes are a critical class of stochastic processes that play a vital role in modern machine learning models and algorithms. This course focuses on the theory and applications of continuous-time diffusion processes in machine learning, designed for undergraduates, graduates, and researchers with background in probability theory. Starting with typical problem scenarios, the course systematically explores core algorithm design principles and theoretical frameworks, extending to cutting-edge advancements in the field. Key topics include Monte Carlo sampling algorithms, diffusion generative models, and continuous-time reinforcement learning. Through a blend of theoretical instruction, literature studies, and course projects, students will gain a solid understanding of the fundamental theories of diffusion processes, learn about the latest developments in the field, and engage in research training.

-End-

课程号（Course Number）： 04835730
课程名称（Course Title）：蛋白质设计中的人工智能方法/Artificial Intelligence for Protein Design
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）： 张铭

先修课程（Prerequisites）： 无具体先修课程。学生应具备一定的计算机基础，会使用命令行工具，熟悉python相关依赖配置管理（conda、pypi等）。

中文简介：
本课程旨在介绍蛋白质设计的基本概念及基于人工智能的蛋白质设计在工业领域的重要应用。课程将深入探讨人工智能在蛋白质设计中的前沿应用，包括蛋白质结构预测、基于结构的序列生成、蛋白质语言模型等。课程重点介绍AlphaFold、RFDiffusion、ESM等主流AI技术的原理及实践，帮助学生理解如何利用AI工具设计新型蛋白质。通过理论讲解与实践操作相结合的方式，本课程将培养学生在交叉学科领域的创新思维和应用能力。

英文简介（Course Description）：
This course aims to introduce the fundamental concepts of protein design and its important applications in the industrial field. It will explore cutting-edge applications of artificial intelligence in protein design, including protein structure prediction, structure-based sequence generation, and protein language models. The course will focus on the principles and practical applications of mainstream AI technologies such as AlphaFold, RFDiffusion, and ESM, helping students understand how to utilize AI tools for designing novel proteins. Through a combination of theoretical instruction and hands-on practice, this course will foster students' innovative thinking and application skills in interdisciplinary fields.

-End-

课程号（Course Number）： 04330345
课程名称（Course Title）：非物质文化遗产与中国艺术/Intangible Cultural Heritage and Chinese art
开课院系（School/Department）： 艺术学院/School of Arts
学分（Credits）： 2
授课教师（Faculty）： 陈均

先修课程（Prerequisites）： 无

中文简介：
自2001年以来，非物质文化遗产逐渐成为中国当代社会的重要现象，一方面诸多中国古典艺术以非物质文化的形式重新进入当代文化，另一方面它也对当代艺术有所影响。本课程通过梳理非物质文化遗产的历史、理论与实践，来介绍非物质文化遗产，以及在当代生活中的应用与转化。

英文简介（Course Description）：

Since 2001, intangible cultural heritage has gradually become an important phenomenon in Chinese contemporary society. On the one hand, many classical Chinese arts re-enter contemporary culture in the form of intangible culture, and on the other hand, it also has an impact on contemporary art. This course introduces intangible cultural heritage, as well as its application and transformation in contemporary life by combing the history, theory and practice of intangible cultural heritage.

-End-

课程号（Course Number）： 04330349
课程名称（Course Title）：艺术与设计/Art & Design
开课院系（School/Department）： 艺术学院/School of Arts
学分（Credits）： 1
授课教师（Faculty）： BALDINI ANDREA

先修课程（Prerequisites）： 无

中文简介：
本课程探讨艺术与设计的交汇点，重点研究汽车设计美学、其历史演变以及概念设计思维。课程内容包括设计的历史与理论讲座，以及与行业合作伙伴的实际合作，开发现实世界的设计解决方案。通过真实评估，学生将参与小组项目，结合创意思维与团队合作，培养在设计挑战中解决问题的能力。

英文简介（Course Description）：
This course explores the intersection of art and design, with a focus on automotive design aesthetics, its historical evolution, and conceptual design thinking. The course includes lectures on the history and theory of design, as well as a practical collaboration with an industry partner to develop real-world design solutions. Students will engage in Authentic Assessment through group projects that combine creative thinking and team collaboration, fostering critical problem-solving skills within the context of design challenges.

-End-

课程号（Course Number）： 03835260
课程名称（Course Title）：英语名著与电影/English Classics Through Films
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）： 钱清

先修课程（Prerequisites）： 无

中文简介：

《英语名著与电影》归属大学英语B级课程。本课程是一门集英美文学知识、英美名著选读、由名著改编的电影欣赏及视听训练于一体的综合课。为那些对英美文学感兴趣，想进一步拓展自己现有的文学知识、提高现有的语言能力的非英语专业的学生设置。

本课的目的是通过将文学与电影这两种不同的艺术形式有效结合，使非英语专业的学生在较短的时间内对英美文学的发展有一个大概的了解，激发学生们对阅读英文原著的兴趣，提高他们的语言水平和鉴赏能力。

本课程将向学生较系统地介绍英美文学发展的主要阶段及其特点，有关作家的文学生涯、创作思想、艺术特色以及代表作品的主题思想、情节结构、人物刻画、语言风格、历史意义等。教学内容以教材为主，课上将补充、讲解相关知识。

英文简介（Course Description）：

English Classics Through Films, a comprehensive course that combines knowledge of English and American literatures, selected readings of their classics, appreciation of the films adapted from these classics, and audiovisual exercises, is designed for non-English majors at Level 2 who are interested in English and American literatures and wish to extend their literary acquirement and improve their English skills.

By effectively combining the two distinct artistic forms of literature and film, this course aims to acquaint non-English majors with a general knowledge of evolution of English and American literatures within a relatively short time, stimulate their interest in reading the original works, and enhance their language proficiency and aesthetic taste.

This course is intended to give students a reasonably systematic introduction to the major developmental stages of English and American literatures and their characteristics; the concerned writers' literary careers, guidelines for creation, artistic qualities, and their representative works' themes, plotting, characterization, language use, and historical influence. In each lecture one or two chapters of the novel will be selected as Reading Comprehension.

Students can benefit from this course in many respects, such as building up their vocabulary, expanding their horizons, improving their deep intuitive understanding of a person or thing, and promoting their ability to handle difficult real-life situations and crises in relationships.

-End-

课程号（Course Number）：03835260

课程名称（Course Title）：英语名著与电影/English Classics Through Films

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）： 钱清

先修课程（Prerequisites）： 无

中文简介：
《英语名著与电影》归属大学英语B级课程。本课程是一门集英美文学知识、英美名著选读、由名著改编的电影欣赏及视听训练于一体的综合课。为那些对英美文学感兴趣，想进一步拓展自己现有的文学知识、提高现有的语言能力的非英语专业的学生设置。

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课程号（Course Number）： 03835260
课程名称（Course Title）：英语名著与电影/English Classics Through Films
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）： 于莹

先修课程（Prerequisites）： 无

中文简介：
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-End-

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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）： 于莹

先修课程（Prerequisites）： 无

中文简介：
《英语名著与电影》归属大学英语B级课程。本课程是一门集英美文学知识、英美名著选读、由名著改编的电影欣赏及视听训练于一体的综合课。为那些对英美文学感兴趣，想进一步拓展自己现有的文学知识、提高现有的语言能力的非英语专业的学生设置。

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-End-

课程号（Course Number）： 03835360
课程名称（Course Title）：英汉口译/Consecutive Interpretation
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）： 方舒琼

先修课程（Prerequisites）：

中文简介：
英汉口译》是北京大学外国语学院英语系大学英语教研室开设的专题课，介绍口译基本理论和技巧，进行英汉、汉英互译训练，以使学生初步了解口译基本理论和技巧，掌握口译记忆方法和笔记方法，能够比较准确、流畅地完成一般性材料的汉英互译。

英文简介（Course Description）：

-End-

课程号（Course Number）： 03835360
课程名称（Course Title）：英汉口译/Consecutive Interpretation
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）： 方舒琼

先修课程（Prerequisites）：

中文简介：
英汉口译》是北京大学外国语学院英语系大学英语教研室开设的专题课，介绍口译基本理论和技巧，进行英汉、汉英互译训练，以使学生初步了解口译基本理论和技巧，掌握口译记忆方法和笔记方法，能够比较准确、流畅地完成一般性材料的汉英互译。

英文简介（Course Description）：

-End-

课程号（Course Number）：03835730
课程名称（Course Title）：美国文化概览/Introduction to American Culture
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）：马小琦

先修课程（Prerequisites）：无

中文简介：
本课程是为非英语专业学生基础阶段开设的文化专题课，课程类别为本科必修，由外教授课。本课程的目标在于：通过重点介绍美国的历史文化、风土人情、风俗习惯和语言发展等，帮助学生拓展有关这些英语国家文化历史发展的知识，提高阅读英文书刊和同英语国家人士交往的能力，从而激发他们的学习兴趣，为进一步学习打下基础；培养学生辨证唯物主义的历史观，增强学生的跨文化意识，从而进一步增强学生的跨文化交际能力。

英文简介（Course Description）：
This course is taught by American professors. Students will have a brief understanding of American culture through teachers' instruction, classroom discussion, group work and after-class assignments. It is designed to cover the basics of American history and development, culture and customs. The course aims to develop students' intercultural communicative skills by broadening their understanding of American culture

-End-

课程号（Course Number）：03835730
课程名称（Course Title）：美国文化概览/Introduction to American Culture
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）：马小琦

先修课程（Prerequisites）：无

中文简介：
本课程是为非英语专业学生基础阶段开设的文化专题课，课程类别为本科必修，由外教授课。本课程的目标在于：通过重点介绍美国的历史文化、风土人情、风俗习惯和语言发展等，帮助学生拓展有关这些英语国家文化历史发展的知识，提高阅读英文书刊和同英语国家人士交往的能力，从而激发他们的学习兴趣，为进一步学习打下基础；培养学生辨证唯物主义的历史观，增强学生的跨文化意识，从而进一步增强学生的跨文化交际能力。

英文简介（Course Description）：
This course is taught by American professors. Students will have a brief understanding of American culture through teachers' instruction, classroom discussion, group work and after-class assignments. It is designed to cover the basics of American history and development, culture and customs. The course aims to develop students' intercultural communicative skills by broadening their understanding of American culture

-End-

课程号（Course Number）： 03835780
课程名称（Course Title）：批判性思维与学术写作/Critical Thinking and Academic Writing
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）： 张欢瑞

先修课程（Prerequisites）： 无

中文简介：
本课程将向学生介绍批判性思维与学术写作的要求与规则，关注文本分析、有效论证的建构以及证据和二手资料的使用，讲解写作的基本过程。
学生通过阅读各种文体的具有挑战性的材料以及写作从而强化其批判性思维的能力，提炼其修辞技能，写作过程中着重关注修改和文体风格。

英文简介（Course Description）：
This course introduces students to the demands and conventions of critical thinking and writing. It focuses on analyzing texts, building effective arguments, and using evidence and secondary source materials as well as the instruction on the stages of the writing process, from pre-writing exercises through rough drafts and revisions.

Students enhance their critical thinking abilities by reading and writing challenging material, refine their rhetorical strategies, practice writing processes with special attention to revision and style, and write and read in a variety of genres. Their writing exercise includes formal and informal writing and preparing a final portfolio.

-End-

课程号（Course Number）： 03835780
课程名称（Course Title）：批判性思维与学术写作/Critical Thinking and Academic Writing
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）： 张欢瑞

先修课程（Prerequisites）：无

中文简介：
本课程将向学生介绍批判性思维与学术写作的要求与规则，关注文本分析、有效论证的建构以及证据和二手资料的使用，讲解写作的基本过程。
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Students enhance their critical thinking abilities by reading and writing challenging material, refine their rhetorical strategies, practice writing processes with special attention to revision and style, and write and read in a variety of genres. Their writing exercise includes formal and informal writing and preparing a final portfolio.

-End-

课程号（Course Number）：03835860
课程名称（Course Title）：英语公众演讲/English Public Speaking
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）：马小琦

先修课程（Prerequisites）：大学英语模块化课程

中文简介：
本课程系统地介绍和讨论英语公众演讲所涉及到的各个环节，并辅助学生完成自我介绍性，说明性，和劝说性的演讲任务，旨在首先提高学生口头演讲的表达与沟通能力，其次改善学生演讲稿件的写作能力。此外，本课程在一定程度上培养学生对口头讲演和演讲稿件的批判性思维能力，以及利用网络和图书馆进行信息查询，收集，和整理的能力。
本课程把英语口头表达训练与书面写作练习有机地联系到一起，加强学生对英语主动产出能力的综合运用训练，为学生在将来实际工作中的英语应用做好铺垫。

英文简介（Course Description）：
n/a

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课程号（Course Number）：03835860
课程名称（Course Title）：英语公众演讲/English Public Speaking
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）：马小琦

先修课程（Prerequisites）：大学英语模块化课程

中文简介：
本课程系统地介绍和讨论英语公众演讲所涉及到的各个环节，并辅助学生完成自我介绍性，说明性，和劝说性的演讲任务，旨在首先提高学生口头演讲的表达与沟通能力，其次改善学生演讲稿件的写作能力。此外，本课程在一定程度上培养学生对口头讲演和演讲稿件的批判性思维能力，以及利用网络和图书馆进行信息查询，收集，和整理的能力。
本课程把英语口头表达训练与书面写作练习有机地联系到一起，加强学生对英语主动产出能力的综合运用训练，为学生在将来实际工作中的英语应用做好铺垫。

英文简介（Course Description）：
n/a

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课程号（Course Number）：03835950
课程名称（Course Title）：高级英语口语/Advanced Oral English
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）：马小琦

先修课程（Prerequisites）：无

中文简介：
本课程为外教授课，旨在通过课堂讨论，小组活动，口语交流等多种多样的活动提高学生在实际生活中的英语口语应用能力。本课程不仅为学生创造良好的口语交流环境，同时也丰富了学生的文化体验，使学生充分锻炼在各种场景中的英语会话与交际能力。

英文简介（Course Description）：
This class is a dynamic oral English class designed to develop and strengthen language skills through practical in-class discussions, activities, and dialogues. These in-class exercises are complemented by an intensive audio-visual-oral computer program designed to reinforce English communication skills. The purpose of the class is two-fold: to provide students a stimulating environment in which to practice oral English and

to allow them the opportunity to interact and gain cultural experience from a native English teacher. With a special emphasis on interactive learning, the overall objectives are for students to improve pronunciation and their ability to express ideas clearly in both formal and informal settings.

One important aspect of the class is that the students get to know each other well, so they can more comfortably communicate in a second language. Through various group and individual activities, students build relationships of trust that allow them to not only increase their second language proficiency, but gain valuable communication skills. Because the class provides students an opportunity to work in groups, they build a foundation in teamwork. This empowers them with an understanding of how effective interdependence contributes to a successful work environment. environment.

-End-

课程号（Course Number）： 03835950
课程名称（Course Title）：高级英语口语/Advanced Oral English
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）： 马小琦

先修课程（Prerequisites）： 无

中文简介：
本课程为外教授课，旨在通过课堂讨论，小组活动，口语交流等多种多样的活动提高学生在实际生活中的英语口语应用能力。本课程不仅为学生创造良好的口语交流环境，同时也丰富了学生的文化体验，使学生充分锻炼在各种场景中的英语会话与交际能力。

英文简介（Course Description）：
This class is a dynamic oral English class designed to develop and strengthen language skills through practical in-class discussions, activities, and dialogues. These in-class exercises are complemented by an intensive audio-visual-oral computer program designed to reinforce English communication skills. The purpose of the class is two-fold: to provide students a stimulating environment in which to practice oral English and to allow them the opportunity to interact and gain cultural experience from a native English teacher. With a special emphasis on interactive learning, the overall objectives are for students to improve pronunciation and their ability to express ideas clearly in both formal and informal settings.

One important aspect of the class is that the students get to know each other well, so they can more comfortably communicate in a second language. Through various group and individual activities, students build relationships of trust that allow them to not only increase their second language proficiency, but gain valuable communication skills. Because the class provides students an opportunity to work in groups, they build

a foundation in teamwork. This empowers them with an understanding of how effective interdependence contributes to a successful work environment. environment.

-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。课程内容主要包括英国英语、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.

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课程号（Course Number）： 03835995
课程名称（Course Title）：学术英语阅读/Academic English Reading
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）： 马小琦

先修课程（Prerequisites）： 无

中文简介：
“学术英语阅读”是一个专门的阅读训练课，要求学生大量阅读、精细阅读。课程难度大，教材使用上海外语教学出版社的“全新版大学英语阅读教程”（高级版）4册，以及尚未出版的第5册，推荐一定量的课下阅读资料。除了为学生提供基本的阅读训练、提高学生的阅读能力与兴趣，本课程还训练学生的学术阅读能力，教会学生查字典、用英语改写和总结的能力，注重英语语言的概念教学，培养学生的英语思维能力，为学习者未来的学术阅读和写作打下坚实的基础。

英文简介（Course Description）：
“Academic English Reading” is a specialized course designed for advanced students who want to further their study in English. The learners are required to read intensively a mass of reading materials, including Book 4 of College English Reading course published by Shanghai Foreign language Education Press, Book 5 of the same course, unpublished, and a recommended list for further reading. Aiming at laying a solid foundation for academic reading and writing as well as providing basic training to improve reading skills and reading achievement, the main task of this course is to help the learners gain reading proficiency for academic literature, learning how to consult a dictionary, how to paraphrase, how to write a summary, and familiarize the learners with the English

way of thinking by constantly strengthening their awareness of the concepts formed by and in the language.

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课程号（Course Number）：03835995
课程名称（Course Title）：学术英语阅读/Academic English Reading
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）：马小琦

先修课程（Prerequisites）：无

中文简介：
“学术英语阅读”是一个专门的阅读训练课，要求学生大量阅读、精细阅读。课程难度大，教材使用上海外语教学出版社的“全新版大学英语阅读教程”（高级版）4册，以及尚未出版的第5册，推荐一定量的课下阅读资料。除了为学生提供基本的阅读训练、提高学生的阅读能力与兴趣，本课程还训练学生的学术阅读能力，教会学生查字典、用英语改写和总结的能力，注重英语语言的概念教学，培养学生的英语思维能力，为学习者未来的学术阅读和写作打下坚实的基础。

英文简介（Course Description）：
“Academic English Reading” is a specialized course designed for advanced students who want to further their study in English. The learners are required to read intensively a mass of reading materials, including Book 4 of College English Reading course published by Shanghai Foreign language Education Press, Book 5 of the same course, unpublished, and a recommended list for further reading. Aiming at laying a solid foundation for academic reading and writing as well as providing basic training to improve reading skills and reading achievement, the main task of this course is to help the learners gain reading proficiency for academic literature, learning how to consult a dictionary, how to paraphrase, how to write a summary, and familiarize the learners with the English way of thinking by constantly strengthening their awareness of the concepts formed by and in the language.

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课程号（Course Number）：04631829
课程名称（Course Title）：实地研学：丝绸之路上的敦煌/Field study:Dunhuang on the Silk Road
开课院系（School/Department）：元培学院/Yuanpei College
学分（Credits）：1

授课教师（Faculty）：孙飞宇

先修课程（Prerequisites）：无

中文简介：
本课程旨在从宏观的丝绸之路历史发展到微观的敦煌艺术文化，通过对敦煌的历史、地理、考古和艺术等多个专题详加解读，深入浅出地介绍敦煌和敦煌石窟艺术，使同学在了解敦煌与丝绸之路的关系，以及敦煌石窟艺术中所呈现出的中西文化交流特征的基础上，理解敦煌和丝绸之路在中国历史上的重要作用，及其对中国文化发展的深刻影响，探讨文化交流在中华民族共同体建构中的意义与价值。
为更好地发挥通识教育在学校本科人才培养中的作用，本次研学课程面向元培学生，由复旦大学通识教育中心和北京大学元培学院共同举办，复旦大学和北京大学元培学院本科生共同参与。

英文简介（Course Description）：
This course is designed to traverse the expansive history of the Silk Road to the intricate art and culture of Dunhuang. Through a detailed exploration of various topics such as the history, geography, archaeology, and art of Dunhuang, it aims to provide an accessible yet profound introduction to Dunhuang and the art of the Mogao Caves. Students will gain an understanding of Dunhuang's relationship with the Silk Road and the characteristics of cultural exchange between East and West as reflected in the art of the Dunhuang Caves. On this basis, the course seeks to elucidate the significant role of Dunhuang and the Silk Road in Chinese history and their profound impact on the development of Chinese culture. Furthermore, it will delve into the significance and value of cultural exchange in the construction of the Chinese national community.
To further enhance the role of general education in the cultivation of undergraduate talents at our university, this field study course is specifically designed for Yuanpei students. It is jointly organized by the General Education Center of Fudan University and Yuanpei College of Peking University, with undergraduate students from both Fudan University and Yuanpei College of Peking University participating together.

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课程号（Course Number）：02304663
课程名称（Course Title）：哲学研讨/Philosophy Colloquium
开课院系（School/Department）：哲学系/Department of Philosophy
学分（Credits）：2
授课教师（Faculty）：GREVESEBASTIAN , Jennifer Nagel(校外)

先修课程（Prerequisites）：Open, in principle, to all PKU undergraduate students
Target audience: Philosophy majors, 2nd year and above, and equivalent
Prerequisite: Having studied at least one PKU philosophy course
Application: One-paragraph statement of purpose, half a page max.

中文简介：

《北大哲学研讨》的目的是为学生提供与国际顶尖哲学学者近距离学习的机会，重点关注该学者目前正在进行的前沿研究。学生们会参与到受邀学者的选择过程中，作为一个团体，他们可以共同决定邀请谁。这种基本设置旨在营造一个令人兴奋且有效的学习环境，让访问学者和学生都能最大限度地投入到课程内容中。通过这种方式，学生将得到精心的指导，从理论和实践两方面理解哲学领域中世界领先的前沿研究的内容和方法。

结合项目负责人的预备研讨会，学生将一起研究访问学者工作的选定方面，并各自撰写简短的讨论文章——每篇约 1,500 字——重点关注他们认为特别有趣的元素。这些短文将在访问学者访问前与访问学者分享。访问学者将以公开授课开始，其中包括学生讨论环节。随后，将举行为期两天的研讨会，围绕访问学者对学生论文和报告的口头回应展开。

第一届《北大哲学研讨》的访问学者是多伦多大学的 Jennifer Nagel 教授。她将分享其即将出版的书稿《识别知识：直觉与反思的认识论》（与牛津大学出版社签约）中的材料。该书呈现了哲学与心理学领域的新跨学科研究，探讨了人类追踪他人所知与所不知的卓越能力。这种能力指导我们在日常社会中的行动，并为认识论提供直觉判断作为原始数据，判断各种可能的知识案例。多年来，哲学家、心理学家和社会学家发现了各种跨文化稳健的认识直觉模式，这些模式虽然在系统性上极具吸引力，但往往又带有令人困惑的悖论性。内格尔教授的课程将探讨我们探测知识能力的自然起源和功能，寻找更好地分析认识论数据的方法，并最终揭示关于知识本身更清晰的理解。

英文简介（Course Description）：

The objective of the PKU Philosophy Colloquium is to provide students with an opportunity to study closely together with an international top scholar in philosophy, with a focus on the cutting-edge research that the scholar is currently undertaking. Students are consulted on the selection of scholars that will be invited; as a group they can choose whom to invite. This basic setting is intended to facilitate an exciting and effective learning environment, in which both the visiting scholar and the students can be maximally enthusiastic about the contents of the course. In this way, the students will be carefully guided to both a theoretical and a practical understanding of the contents and methods of world-leading cutting-edge research in philosophy.

In conjunction with preparatory seminars taught by the project leader, the students will study selected aspects of the visiting scholar’s work together and each compose short discussion pieces – approximately 1,500 words each – focusing on elements they find especially intriguing. These short essays will be shared with the visiting scholar in advance of their visit. The visiting scholar will begin the visit by giving public lectures including time for student discussion. Subsequently, there will be a two-day colloquium revolving around the visiting scholar’s oral responses to student essays and presentations.

The visiting scholar for the 1st PKU Philosophy Colloquium is Prof. Jennifer Nagel of the University of Toronto. She will share material from her advanced book manuscript

‘Recognizing Knowledge: Intuitive and Reflective Epistemology’ (under contract with Oxford University Press). The book presents new interdisciplinary research in philosophy and psychology concerning humans’ remarkable capacity to track what others do and do not know. This capacity guides us in everyday social navigation. It also provides raw data to epistemology, in the form of intuitive judgments about possible cases of knowledge. Over the years, philosophers, psychologists, and sociologists have discovered a variety of cross-culturally robust patterns of epistemic intuition, patterns that are attractively systematic, but often disturbingly paradoxical. Prof. Nagel’s course will examine the natural origins and functions of our capacity to detect knowledge, in search of a better analysis of the data guiding epistemology, and ultimately a clearer view of knowledge itself.

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课程号（Course Number）：02334141
课程名称（Course Title）：科学哲学前沿/Summer School on Philosophy of Science
开课院系（School/Department）：哲学系/Department of Philosophy
学分（Credits）：2
授课教师（Faculty）：陆俏颖 ，Peter Takacs(校外) ，Nicholas J. Teh(校外)

先修课程(Prerequisites)：No Prerequisite. Open to any undergraduate student interested in the philosophy of science.

中文简介：
这门课程提供了对物理学和生物学哲学基础的跨学科探索，旨在阐明它们的概念框架和方法论。通过整合物理学哲学和生物学哲学的见解，学生将深入了解这些科学领域内的基本问题、假设和争论。
课程的第一周将探讨物理学哲学，审视空间、时间、因果关系和物理定律等基础概念。学生将批判性地分析量子力学、相对论和热力学等理论对我们对现实、决定论和科学知识界限的理解的影响。
第二周的焦点将转向生物学哲学，学生将探索生命的本质、演化、复杂性以及在生物系统中目的论的作用。主题可能包括物种的定义、自然选择机制、基因与性状之间的关系，以及遗传学发展的哲学意义。
整个课程将关注物理学和生物学之间的交叉点，包括对涌现、还原主义和科学统一性的讨论。学生将培养批判性思维能力，并对物理学和生物学的哲学基础有着细致的理解。他们将能够对科学理论进行批判性评估，阐明自己的哲学立场，并欣赏不同科学学科之间的相互联系。

英文简介（Course Description）：
This course offers an interdisciplinary exploration of the philosophical underpinnings of both physics and biology, aiming to elucidate their conceptual frameworks, methodologies, and implications. By integrating insights from the philosophy of physics and the philosophy of biology, students will gain a deep understanding of the fundamental

questions, assumptions, and debates within these sciences.
The first week of the course delves into the philosophy of physics, examining foundational concepts such as space, time, causality, and the nature of physical laws. Students will critically analyze the implications of theories such as quantum mechanics, relativity, and thermodynamics on our understanding of reality, determinism, and the limits of scientific knowledge.
In the second week, the focus shifts to the philosophy of biology, where students will explore the nature of life, evolution, complexity, and the role of teleology in biological systems. Topics may include the nature of species, the mechanisms of natural selection, the relationship between genes and traits, and the philosophical implications of developments in genetics and synthetic biology.
Throughout the course, attention will be given to the intersections between physics and biology, including discussions on emergence, reductionism, and the unity of science. Students will have developed critical thinking skills and a nuanced understanding of the philosophical foundations of both physics and biology. They will be equipped to critically evaluate scientific theories, articulate their own philosophical positions, and appreciate the interconnectedness of different scientific disciplines.

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课程号（Course Number）： 18730002
课程名称（Course Title）：社会时空数据分析与建模/Social spatiotemporal data analysis and modeling
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

先修课程（Prerequisites）： 无

中文简介：
近年来，时空数据技术及应用在如金融投资、资源管理、社会科学研究、公共安全、智慧城市等领域发挥出重要作用。社会时空数据（Social spatiotemporal data）是包括时间、空间、社会属性的三维信息。社会时空数据分析与建模指的是利用时空数据，进行分析与建模，以解决实际社会问题的技术，是时空社会科学的基础。通过本课程的学习，使学生能够理解社会时空数据的基本特点，能够利用一些统计软件（Stata和Geoda）来分析和解决社会问题，并通过平时的实际操作和课程作业，培养学生利用时空数据实际分析和解决社会问题的能力。鉴于时空数据的跨学科属性，本课程是面向零基础、不区分专业的本科生所量身定做的入门级课程，可以看成是承接本科阶段和研究生阶段学习的过度课程，为以后本科生继续深入和研究时空数据提供基本的理论基础和方法训练。课程讲解力求深入浅出，精讲细讲，不光讲解和实例演示各种方法的过程与原理，还要加强学生对各种方法的深入理解和动手操作，让学生能够学以致用。在内容安排上，遵循由易到难、循序渐进原则；在软件操作上，通过手把手指导学生进行演练的方式进行教学，确保零基础学生也能学得会。

英文简介（Course Description）：
In recent years, spatiotemporal data technology and applications have played an important role in areas such as financial investment, resource management, social science research, public safety, and smart cities. Social spatiotemporal data is three-dimensional information including time, space, and social attributes. Social spatiotemporal data analysis and modeling refers to the use of spatiotemporal data, analysis and modeling, in order to solve the actual social problems of the technology, is the foundation of spatiotemporal social science. Through the study of this course, students will be able to understand the basic characteristics of spatiotemporal data in society, and be able to use some statistical software (Stata and Geoda) to analyze and solve social problems, and through the usual practical operation and course assignments, they will cultivate the ability to utilize spatiotemporal data to actually analyze and solve social problems. In view of the interdisciplinary attributes of spatiotemporal data, this course is an introductory course tailored for undergraduates with no basic knowledge and no distinction between majors, and can be regarded as an overload course to carry on undergraduate and postgraduate. In the arrangement of the content, from easy to difficult, step by step; in the operation of the software, by hand to guide the students to carry out exercises in the way of teaching, to ensure that zero-basic students can also learn.

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课程号（Course Number）： 18730003
课程名称（Course Title）：Stata数据分析与应用/Data Analysis and Applications with Stata
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，吕萍，任莉颖(校外)

先修课程（Prerequisites）： 无

中文简介：
本课程旨在帮助学生快速掌握Stata软件的使用技巧，并运用其进行数据分析。课程内容涵盖Stata软件基础、数据管理、变量处理、数据可视化、统计分析、回归分析等多个方面，并结合实际案例进行讲解，帮助学生将理论知识应用于实践。课程内容设计系统全面，涵盖Stata数据分析的各个方面，从基础到进阶，循序渐进。结合大量实际案例进行讲解，提供课程数据、详细的Stata操作步骤和代码，方便学生学习和复习。通过学习本课程，学生将能够熟练使用Stata软件进行数据分析，掌握常用的统计分析方法和模型，具备独立完成数据分析项目的能力。

英文简介（Course Description）：
This course is designed to help students quickly master the usage skills of Stata software and apply it to data analysis. The course content covers various aspects such

as Stata software basics, data management, variable processing, data visualization, statistical analysis, and regression analysis, combined with practical case studies to help students apply theoretical knowledge to practice. The course content is systematically comprehensive, covering all aspects of Stata data analysis, from basics to advanced levels, progressing in a step-by-step manner. It incorporates a large number of practical case studies, providing course data, detailed Stata operation steps, and code to facilitate student learning and review. By taking this course, students will be able to proficiently use Stata software for data analysis, master common statistical analysis methods and models, and possess the ability to independently complete data analysis projects.

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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，吕萍，吴琼

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.

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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）：任强，顾佳峰，孔涛，吴琼，丁华，吕萍，孙妍

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.

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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.

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