

**Course list for Cross-institutional Course/Subject Enrolment Scheme for Research Postgraduate Students
(2025-26, Term 2)
Institution: The Chinese University of Hong Kong**

Course Code	Course Title	Units	Keyword Syllabus or Brief Subject Description	Pre-requisites (if any)	Result Grade	Medium of Instruction	Remarks, if any
ACCT7190	Research Methodology in Accounting	3	The course is designed to equip students with skills necessary for advanced research in accounting areas. Topics covered will include identification of research problems, development of research hypotheses, research design, data collection and processing, statistical tests, interpretation of results, and writing of research reports. Selected papers and topical research issues will also be discussed. The emphasis will be on the application of the research methods to solving accounting-related problems.	-	A-F	English	-
AIST5030	Generative Artificial Intelligence	3	The course aims at equipping students with an overview of latest generative AI (GenAI) technologies that generate various types of data, e.g., images, videos, audios, text, code, music and molecules, etc. that are profoundly impacting the industry and society. The course will provide a comprehensive understanding of the fundamental concepts and techniques behind GenAI, including generative models, probabilistic models, deep learning architectures, and self-supervised/unsupervised learning, etc. The advanced topics of large language models, conversational AI and multi-modality generative AI will be further explored. Applications on speech and conversational data will be introduced to illustrate the concepts and techniques of GenAI. The ethical and social implications of GenAI will also be discussed in the course, so that students can critically analyze the impact of GenAI on society and propose ethical guidelines for its development and deployment. Ample opportunities will be provided to students to apply what they have learned in class through hands-on implementation and research paper on course projects. The course is suitable for students who have some background in machine learning, probability, statistics, and linear algebra.	-	A-F	English	-
ANTH6020	Seminars in Research Methods	3	This seminar will introduce you to a range of techniques for collecting and analyzing data. The course will also seek to help you prepare for your own research and field work. Being a seminar, the course will require extensive reading; classes will be discussions rather than lectures, and you are expected to ask questions and volunteer answers. Other teachers and advanced graduate students will be invited to participate in the course.	-	A-F	English	Subject to teacher's approval on individual application.
BASA6001	Research Methodology in Behavioural Studies I	3	This course is divided into two main parts. The first part is focused on the application of the philosophy of science to behavioral research in business. Basic concepts such as explanation, scientific laws, and theory are introduced and discussed. The second part provides an introduction to the various stages of scientific research which include research design, measurement scale and development, sampling design, data collection and statistical analysis. Even though mathematical proofs and statistical derivations will be reduced to a minimum, having the knowledge of basic statistics and matrix manipulations will be helpful.	-	A-F	English	-
CHEM5303	Recent Development of Nanoscience and Nanotechnology	2	Minimization of materials to the nanometer scale imposes new properties and functions on nanomaterials. This course will introduce the underlying principles and applications of the emerging field of Nanoscience and Nanotechnology. Tools and principles relevant at the nanoscale dimension will be introduced. Current and future nanotechnology applications will be discussed in chemistry, physics, biology, engineering, materials, electronics, and energy. Through guided literature review and interactive guest lectures, the very recent research progress and prospective applications of nanomaterials and nanotechnology will be demonstrated to deepen postgraduate students' understanding to current status and challenges of nanoscience.	The student should have taken a course in Materials Chemistry, Materials Science, or equivalent.	A-F	English	Quota for visiting students: 5
CHEM5780	Mass Spectrometry of Biomolecules	2	This course aims to provide students with the fundamental concepts and applications of mass spectrometry. It consists of several core modules including desorption/ionization techniques, ion activation methods, mass analysers and ion detectors. The use of mass spectrometry methods for structural elucidation of small organic molecules. Theory of unimolecular decomposition and simple mass spectral interpretation will be taught. Biological applications of mass spectrometry, including genomic, proteomic and glycomic applications, will also be taught. Through the guided literature reviews and presentations, postgraduate students will have a better understanding on the extended applications of mass spectrometry, including protein conformation analysis and mass spectrometry imaging.	-	A-F	English	Quota for visiting students: 10
CHLL6161	Special Topics in Chinese Linguistics II	3	Special emphasis on the use and analysis of paleographic materials. Topics vary according to students' research interests and focuses.	-	A-F	Cantonese, Putonghua	-
CHLL6251	Special Topics in Classical Chinese Texts I	3	Critical study of topics that pertain to compilation, transcription, transmission, commentaries, and annotations of ancient Chinese texts. Students are required to conduct research on a chosen topic under guidance.	-	A-F	Cantonese, Putonghua	-
COMM5330	Qualitative Communication Research	3	This course is a graduate-level introduction to the qualitative methodology in communication. It will provide students with hands-on experiences with different approaches such as discourse analysis, ethnomethodology, ethnography and biographic method.	Experience with communication theory and methodology.	A-F	English	Quota for visiting students: 2
COMM6220	Communication Theories II	3	This course provides an advanced engagement with media, technology, human, and global communication studies. It introduces students to selective theories, concepts, and debates, representative scholars, and the arguments of their work.	Experience with communication theory and methodology.	A-F	English	Quota for visiting students: 3 (the course teacher may conduct selection interviews)
COMM6320	Digital Research	3	How has the rise of digital media, new data landscape, and computational tools transformed the process of knowledge generation and academic production? In preparing students to engage with this digital social and research environment, this course has three interrelated foci: (1) To introduce epistemological and ontological perspectives on the concepts of data, analytics, and knowledge production; (2) To discuss emerging theoretical approaches to studying digital media-rich phenomenon; (3) To provide basic training on selecting digital data analytic tools and techniques, with an aim to incorporate these skills in research projects.	-	A-F	English	Quota for visiting students: 6
CSCI5350	Advanced Topics in Game Theory	3	This course covers fundamental concepts in game theory. The course starts with pure strategy and mixed strategy Nash equilibrium in strategic games. It then discusses some specific types of games, including zero-sum games, Bayesian games, and introduces other types of equilibriums including correlated equilibrium and evolutionary equilibrium. Extensive games, subgame perfect equilibrium, sequential equilibrium, framing effects, behavioural strategies will then be discussed. Finally, coalitional games and the core will be discussed. Advisory: Students are expected to have taken CSCI2110 or ENGG2440 or ESTR2004, ENGG2040 or ENGG2430 or ESTR2002.	-	A-F	English	-
CSCI5370	Quantum Computing	3	This course provides an introduction to the following topics in quantum computation: 1. Models of quantum computation and communication; 2. Quantum algorithms and their limitations; 3. Other topics (quantum communication, quantum cryptography, quantum proofs, quantum error correction, quantum supremacy).	-	A-F	English	-

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CSCI5640	Natural Language Processing	3	Natural language processing (NLP) is a crucial part of artificial intelligence (AI), which aims to endow computers with the ability to process human language. This course gives an overview of modern deep learning techniques for natural language processing. The course starts with basic linguistic concepts in NLP and moves from shallow bag-of-words representations to richer structural embeddings, which is the foundation for the successful use of deep learning in NLP. Then the course will guide you through three fundamental tasks of NLP: language modeling (LM), natural language understanding (NLU), and natural language generation (NLG), followed by some recent advances such as BERT and adversarial learning. Along the way we will introduce cutting-edge computational models together with insights from a linguistic perspective. Advisory: Students are expected to have the background of deep learning, machine learning, linear algebra, programming, and data structure.	-	A-F	English	-
CULS6030	Topics in Culture, Society and Politics	3	This graduate seminar for research students in cultural studies explores how culture, society, and politics interact. It aims to help students develop sophisticated interpretations and critiques of complex cultural and political issues. By focusing on key theoretical texts, students are expected to perform close readings and supplement these with their own analyses of cultural phenomena. A new theme is introduced each time the course is offered. This year, with the aim of understanding and thinking beyond the current apocalyptic mindset, the topic of this seminar is "The Politics of Life."	-	A-F	English	-
DOTE5121	Econometric Theory and Applications	3	This course is designed for business Ph.D. students who need to apply econometrics in their research. The major contents of this course will focus on two parts. The first part will cover fundamental econometrics topics such as ordinary least squares, instrumental variable estimation, panel data models, and generalized linear model. The second part will cover topics about business causal inference by either randomized field/lab experiments or natural experiments such as matching, difference-in-differences, and regression discontinuity design. This course is a graduate econometrics course that emphasizes application in practice. Knowledge of multivariate calculus, linear algebra, statistics, and econometrics at the undergraduate level is preferred.	-	A-F	English	-
DOTE6635	Artificial Intelligence for Business Research	3	Modern artificial intelligence (AI) has largely reshaped our world over the past 10 years. This course is designed to prepare students from a broad range of business areas (e.g. Finance, Marketing, Accounting, Management, Operations, Information Systems, Business Economics, Hotel Management etc.) for the cutting-edge research that connects AI and business. At a high-level, students taking this course will learn the followings: • Fundamental concepts/methods of machine learning (ML) and AI that are used in business research; • How business researchers have utilized ML/AI and what managerial questions have been addressed by ML/AI in the past several years; • The huge mismatch between AI technologies and the adoption of AI technologies in our fields.	-	A-F	English	-
EESC5010	Solid and Fluid Mechanics	3	This course presents the fundamentals of continuum mechanics illustrated with earth system science applications. Background materials on matrices, vectors and differential operators are first reviewed. The following topics will be covered: tensors and their properties; stress and strain; constitutive equations for Hookean elastic solid and Newtonian viscous fluid; mechanical properties and rheology of geomaterials; Eulerian and Lagrangian kinematics; momentum equations; vorticity and divergence; applications in geomechanics, seismology, atmospheric dynamics, and oceanography.	-	A-F	English	Subject to teacher's approval on individual application.
EESC5180	Earthquake Source Physics	3	This course focuses on the concepts and theory of earthquake source physics. The topics covered include seismic instrumentation, geophysical observations of earthquake source processes, kinematic source representation of earthquakes, dynamic rupture propagation of earthquakes, frictional properties of fault zones, and entire earthquake cycle. Methods and field practice of seismological survey will also be introduced.	-	A-F	English	Subject to teacher's approval on individual application.
EESC5220	Tropical Meteorology	3	This course introduces tropical atmospheric circulation and related air-sea coupling at a variety of spatial and temporal scales. The topics covered include the role of the tropics in the global energy and momentum balance, ITCZ, subtropical high, upper-level anticyclones, tropical ocean circulation, tropical weather, climate and atmosphere-ocean interaction phenomena including meso-scale convective systems, tropical waves, the Hadley and the Walker circulation, El Nino-Southern Oscillation, tropical cyclones, Madden Julian Oscillation, and monsoons.	-	A-F	English	Subject to teacher's approval on individual application.
EESC5270	Cloud Dynamics	3	This course offers a quantitative exploration of the physical processes that govern cloud formation and behaviour in the atmosphere. Students will begin by examining fundamental cloud properties, atmospheric mixing, and convection. The role of aerosols in cloud development is introduced through Köhler theory, followed by an in-depth study of cloud microphysics for both warm and cold cloud systems. A major focus is placed on the microphysical mechanisms that drive the lifecycle of cloud and precipitation particles, including their formation, growth, evaporation, fragmentation, and eventual fallout. The course concludes with a detailed analysis of precipitation processes, linking microphysical dynamics to observable weather phenomena.	-	A-F	English	Subject to teacher's approval on individual application.
EESC5330	Biogeochemistry	3	This course presents the recent understanding and advancements in global biogeochemistry. The lectures are on a range of topics, covering major elemental cycles from the early Earth to future projections and from the lithosphere to the atmosphere, with an emphasis on the Ocean. Advanced concepts of application of biogeochemistry will further be discussed with an emphasis on environmental pollution and global climate change. The fundamentals of major elemental cycles like carbon, nitrogen, phosphorus, oxygen, sulphur, and silicate will also be covered.	-	A-F	English	Subject to teacher's approval on individual application.
EESC5520	Numerical Methods and Modeling for Earth and Environmental Sciences	3	This course covers the principles of numerical methods and modeling relevant for earth and environmental sciences applications. Topics include: optimization; interpolation; finite differencing; numerical solutions to ordinary and partial differential equations; programming numerical models; filtered models; boundary conditions; subgrid-scale processes; data assimilation; applications in earthquake, climate, air quality, weather forecast and groundwater models. Python will be used in this course.	-	A-F	English	Subject to teacher's approval on individual application.
EESC5540	Remote Sensing – Principles and Applications	3	Remote sensing observations are critical for monitoring regional and global changes, determining spatial and temporal variability of the Earth System, and addressing fundamental global issues. This course introduces the basic physical principles of remote sensing, including electromagnetic waves and radiation, optical, microwave, and non-imaging remote sensing. It also presents key concepts and examples on remote sensing applications in Earth system science, such as the atmosphere, lithosphere, hydrosphere, cryosphere, and global changes. This course also provides computer-based lab exercises that facilitate the understanding of remote sensing principles and the processing of remote sensing data.	-	A-F	English	Subject to teacher's approval on individual application.

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EESC550	Practical Atmospheric Modeling	3	This course introduces the basic principles of atmospheric modeling and provides hands-on practice to perform numerical simulations on University computing cluster. It begins with the concept of model and reviewing of physical and chemical processes in the atmosphere. After that, this course will cover introduction and hands-on practice of the three basic processes in atmospheric simulation: pre-processing data, modeling, and post-processing data. The pre-processing process refers to the preparation of data from various sources by different techniques such as the generation of emission inventories for atmospheric chemistry modeling. It then introduces numerical modeling basics such as “model equations and numerical approaches”. For post-processing, this course offers different skills in visualization of the model output and evaluation of model output against real-world observations. This course also introduces advanced knowledge in “model coupling” and “inverse modeling”. Finally, this course provides hands-on practice on simple model development experiments. During the course, we will cover basic Linux environment commands to perform the main tasks mentioned above. Overall, students can anticipate grasping basic modeling concepts and skills from this course, which are of great value to their future careers in both academia and industry.	-	A-F	English	Subject to teacher’s approval on individual application.
ENGE5200	What is Fiction?	3	What are the consequences of a world in which AI-generated content, fake news, and social media have increasingly eroded the boundary between truth and falsity, and how do these consequences impact the study and understanding of literature, the imaginative medium par excellence? This course will explore these questions by examining the concept of fiction, how it is manifested in various genres and forms, and what role it plays for writers and readers in contemporary society. Tracing its historical development, we will investigate the concept of fiction as a crucial dimension across time in various communicative contexts, including but not limited to literary discourse. Through analyzing examples ranging from novels and storytelling to non-fictional genres, including autobiographical discourses, documentaries, social media, and political speeches, students will learn how to evaluate and appreciate dominant perspectives within fiction theory, including panfictionalism, similarism, separationism, speech act theory, and possible worlds semantics. Students interested in gaining the theoretical and analytical tools to understand the many uses of fiction, its roles, effects, and potential consequences in contemporary society are welcome to join the course.	-	A-F	English	-
ENGE5240	Creative Writing	3	The course acquaints students with the art of creative writing at an advanced level. Depending on the specialization(s) of the instructor, creative works will be explored and produced in such genres as poetry, short stories, film-scripts, and/or plays. Students will engage in intensive critique of each other’s works as well as study the generic conventions of the disciplines which focus the course each year. There will also be some emphasis on exploring local and international publishing or performance avenues.	-	A-F	English	-
ENGE5330	Modernist Literature	3	In this course, we will examine various modernist fiction, essays and poetry in order to understand not only the formal and innovative aspects of modernism, but also some of the historical and material conditions which propelled the literary movement of modernism into being in the first place. We will consider such wide-ranging historical issues as imperialism, modernity, war, and female emancipation, and see how these helped shape both the form and content of modernist literature. The course will involve extremely close reading of the texts, with the goals to re-introduce students to terminology useful in literary analysis, and to teach methods to analyze and understand the formal and technical complexities of literary modernism.	-	A-F	English	-
ENGE5340	Distant Readings	3	In the context of a world that was beginning to understand the power of “big data,” Franco Moretti introduced the notion of “distant reading” to the field of literary studies. A method of literary scholarship that embraced the technological explosion at the end of the twentieth century, Moretti’s distant reading looked to transcend a literary studies that he thought of as dominated by the “theological exercise” of close reading – which is to say the “very solemn treatment of very few texts taken very seriously.” Distant reading attempted (attempts) to make sense of thousands of texts at the same time. It asks questions that only a survey of tens of thousands of texts can answer – how does the thematic concern of western literature change over the decades... or over the centuries? And not just the thematic concern of the canonical literature we all know, but all western literature (or as much of it as we can recover today!) Such questions cannot be answered by the individual scholar but, as Moretti understood, they can be answered with the aid of computation. This course introduces you to the debates provoked by Moretti’s ideas and then moves on to show you how distant reading is practiced today. By way of workshop and project-based learning, you will be introduced to the statistical analysis platforms that computational literary studies scholars use today. You will then learn how to use this software in order to generate your own distant readings of a corpus of texts.	-	A-F	English	-
ENGE5410	Psycholinguistics	3	The course will examine some linguistic, behavioural, and neural aspects of language and speech in an English-as-a-second/foreign-language (ESL/EFL) or English-related bilingual context. Selected issues in speech perception, language comprehension and language production as well as the intermediate stages that comprise the language of thought will be considered. Special attention will be given to some current, representative models of discourse comprehension and production and their relevance to second language teaching and learning.	-	A-F	English	-
ENGE5430	Second Language Acquisition	3	The purpose of this course is to introduce definitions, theoretical issues, and empirical research on the topic of second language acquisition (SLA). To be more specific, the aims of this course are to help students 1) gain familiarity with key concepts in SLA research, as a basis for critically understanding and developing professional practices; 2) develop an awareness of and ability to critique and design empirical research on topics related to SLA; 3) build an expert and personally relevant understanding of theoretical and empirical issues in the field, including cognitive-interactionist and frequency-based perspectives of SLA and the roles of learner factors such as age, first language, and individual difference variables; 4) understand the relationship between theory, research, and classroom applications; and 5) achieve increased awareness of how a range of relevant research and research methods can be used for the development of their own teaching practices and research agenda in the Chinese/Asian contexts.	-	A-F	English	-
ENGE5460	Natural Language Processing for Applied Linguistics and Education	3	This course provides a thorough introduction to common NLP techniques, focusing on how computers analyze, comprehend, produce, and process language. It incorporates a hybrid approach combining lecture segments, presentations, and hands-on activities to discuss how we can make use of various applications and programming codes (in Python) to facilitate research in (applied) linguistics and education. The modules that will be covered in the course include: introduction to language and computers, introduction to Python, preprocessing text, optical character recognition, speech to text, web scraping, frequency and n-gram, vector semantics and embeddings, part-of-speech tagging, constituency parsing, and dependency parsing. Crucially, students are expected to critically think about innovative ways to apply NLP techniques in (applied) linguistics and/or education.	-	A-F	English	-

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ENGE5560	Second Language Teaching	3	This course is designed to help students develop robust understanding about how instruction can facilitate second language acquisition. It begins with theories underlying implicit and explicit second language instruction. Then, various pedagogical approaches to second language grammar and vocabulary development are introduced, highlighting the differences between input-based and output-based instruction. In addition, this course reviews empirical findings on the effects of various pedagogical interventions on second language learning so that students can understand the importance of theoretically supported pedagogical approaches in second language teaching.	-	A-F	English	-
ENGE5600	Special Topics in Applied English Linguistics	3	This course provides an opportunity for students to be exposed to some current developments in certain area of applied linguistic research in English. The topics vary according to the research expertise of the staff or the visiting academics. Subject to the approval of the postgraduate linguistics coordinator, students are allowed to take the above course more than once and gain the units each time they pass the course. However, students cannot take courses with the same course code more than once in a single term. Interdisciplinary Approaches to Multilingualism The course aims to investigate a broad range of issues to human cognition, language use and learning. Different theoretical and methodological-analytical approaches will be manifested through discussion of empirical studies of L2 and plurilingual language use and learning. The first part of the course explores innovative pedagogical interventions in digital environments, such as robot-assisted language learning and mobile place-based augmented reality, highlighting patterns of social organisation and learning outcomes that these learning activities made possible. The second part of the course encompasses how abstract linguistic knowledge is learned from experience of language in social context. To this end, usage-based approaches consider (1) the psychology of learning and cognition, (2) corpus analyses of usage from which learners induce their language, (3) child (L1) and second language (L2) analyses of how input and learner cognition together drive acquisition, (4) psycholinguistic analyses of these factors as they affect language processing.	-	A-F	English	-
ENGE5950	Special Topic(s) in Critical Studies	3	This course is designed to investigate areas of specialisation normally not covered under generic studies or literary history. It may involve any one of the following areas in the comparative and interdisciplinary studies of literature: thematology, textual criticism and reader response, aesthetics, Western critical theories and Chinese literary studies, problems in the histories of literary criticism; twentieth-century critical theories; literature and the other arts; literature and sociology; literature and philosophy; literature and history; literature and language; literature and culture. Subject to the approval of the Division Head, students are allowed to take the above course more than once and gain the units each time they pass the course. However, students cannot take courses with the same course code more than once in a single term. The Gothic in the Romantic Era The course provides an opportunity to study the Gothic writing in the Romantic period, a very popular yet much contested category in literary history. We will cover early Gothic writers, Walpole, Radcliffe, and Lewis, and read Mary Shelley's Frankenstein as a key Romantic-Gothic text. We will also consider the Gothic from other perspectives—reading Austen's Northanger Abbey as a parody and translation of the Gothic, examining Romantic-Gothic poems by Coleridge, Byron, and Keats, studying the first English tale of vampire by Polidori, as well as discussing Poe's short stories that gothicise Romanticism. The course aims to study the Gothic from a historical perspective and to explore its influence upon our contemporary culture. The course will emphasise close reading and draw attention to the relationship between text and context, literary creation and critical reception, and between convention and transformation of the Gothic tradition.	-	A-F	English	-
ENGG5282	Nanoelectronics	3	Review of semiconductor physics. Electrons in nanostructures: density of states, quantum confinement, transport properties, nanocontacts, Coulomb blockade. Nanoscale fabrication and synthesis: lithography, nanopatterning, epitaxy and heterostructure, self-assembly, other techniques. Nanoscale characterization: scanning probe microscopy and other microscopic techniques, nanoscale electrical measurements. Nanoscale devices: nano- MOSFETs; carbon nanotube devices, nanowire- and nanoparticle-based devices, organic thin film devices, molecular electronic devices, applications, and commercialization.	ELEG2510 or equivalent	A-F	English	Quota for visiting students: 3
ENGG5403	Linear System Theory and Design	3	Linear system theory and design is the core of modern control approaches, such as optimal, robust, adaptive and multivariable control. This course aims to develop a solid understanding of the fundamentals of linear systems analysis and design using the state space approach. Topics covered include state space representation of systems; solution of state equations; stability analysis; controllability and observability; linear state feedback design; observer and compensator design, advanced multivariable control systems design, decoupling and servo control. This course is a must for higher degree students in control engineering, robotics or servo engineering. It is also very useful for those who are interested in signal processing and computer engineering.	-	A-F	English	-
ENGG5601	Principles of Biomechanics and Biomaterials	3	This course focuses on biomechanics (biostatics, biodynamics, mechanics of biological solids), biomaterials (metals, ceramics, synthetic polymers, natural polymers, composites; characterization of biomaterials; biomaterial scaffolds for regenerative medicine) & clinical applications in the musculoskeletal system (including, sports, traumatology, and rehabilitation), cardiovascular system, and dentistry.	-	A-F	English	Quota for visiting students: 5
GPAD5290	Contemporary Political Science	3	The objective of this course is to acquaint students with the state of the art in political science. The course will analyse recent developments of the discipline pertaining to its scope, methodology, theory and approach. Particular attention will be given to areas where debates and controversies have contributed to the development of knowledge in the field. The ethos, concerns and research concentration of the discipline will also be discussed.	-	A-F	English	-
HIST6016KW	Selected Themes in Comparative History: Japanese-Chinese Translation for Historical Research	3	This course enables students to acquire thorough understanding of the Japanese grammar including morphology and syntax up to advanced level, sentence patterns as well as important Japanese reference tools, which are instrumental in reading different kinds of historical works in Japanese. By reading and translating the classic works of the Japanese scholars, students will also be able to master advanced Japanese grammar, Japanese-Chinese translation skills and the Japanese vocabulary and concepts pertaining to their historical research, and comprehend and review the important views of the Japanese scholars in their research fields. Seminars are conducted to discuss and translate the Japanese historical works related to students' research. https://www.history.cuhk.edu.hk/course/2025262_hist6016kw/	-	A-F	Putonghua, Japanese	Quota for visiting students: 2
HIST7016KW	Selected Themes in Comparative History: Japanese-Chinese Translation for Historical Research	3	This course enables students to acquire thorough understanding of the Japanese grammar including morphology and syntax up to advanced level, sentence patterns as well as important Japanese reference tools, which are instrumental in reading different kinds of historical works in Japanese. By reading and translating the classic works of the Japanese scholars, students will also be able to master advanced Japanese grammar, Japanese-Chinese translation skills and the Japanese vocabulary and concepts pertaining to their historical research, and comprehend and review the important views of the Japanese scholars in their research fields. Seminars are conducted to discuss and translate the Japanese historical works related to students' research. https://www.history.cuhk.edu.hk/course/2025262_hist7016kw/	-	A-F	Putonghua, Japanese	Quota for visiting students: 2

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LING6902	Phonological Theory	3	This course aims to introduce the development of phonological theory over the past half century and to provide a critical survey of the current issues in phonological research. Topics include segmental alternation, syllable structure, tone, stress, and prosodic effect in word formation. Students will gain a solid understanding of the characteristics of different phonological frameworks over the course of the development of phonological theory, and will learn how to analyze a variety of language data within different phonological frameworks.	-	A-F	English	-
LING6940	Linguistics Research Seminars	1	This course aims to engage students in the Department's Linguistics Research Seminars and in-house research activities. These activities will deepen students' knowledge of various fields of specialization, and help prepare them for their future academic and professional careers.	-	A-F	English	-
LING6953	Topics in Neurolinguistics & Psycholinguistics	3	This course introduces students to selected topics concerning neurobiology of language as well as language representation, processing and production. Major theoretical debates and contemporary issues that address different aspects of language will be discussed. The selected topics vary from term to term, but may include syntactic and phonological priming as evidence for language representation, computational modeling of language phenomena, neural correlates of first and second language acquisition, explanatory neurolinguistics, comparative studies of language processing, models of speech production, lexical tone processing, cross-modal studies of language processing, and the bilingual brain.	-	A-F	English	-
LING6980	Research Methodology	3	The course adopts an interactive, problem-based approach, with an aim to training students in conducting linguistics research on a topic of their interest. Focus will be on linguistic analysis and empirical methods in language research. Students may be required to conduct linguistic research through field trips.	-	A-F	English	-
MAEG5070	Nonlinear Control Systems	3	This course consists of two parts. The first part is analysis of nonlinear systems, which includes state space description of nonlinear control systems, phase plane analysis of second order dynamic systems, Lyapunov's stability theory such as Lyapunov's first method, second method, Barbalat's lemma, and total stability. The second part is design of nonlinear control systems, which includes Jacobian linearization, feedback linearization, sliding mode control, and backstepping method.	-	A-F	English	-
MAEG5110	Quantum Control and Quantum Information	3	The field of quantum information science includes quantum control and quantum information. It is a new area of inter-disciplinary research involving physicists, computer scientists, mathematicians and engineers. The course is an introduction to this rapidly expanding field. It covers basic quantum mechanics including quantum entanglement and quantum measurement; the modeling and control of quantum mechanical systems; quantum error correction; quantum communication and quantum information theory.	-	A-F	English	-
MAEG5130	Computational Mechanics	3	Mechanics is the foundation of many emerging research and engineering topics. With the rapid advancement in computing power, numerical methods are preferred to solve differential equations governing the physical process. It opens a whole new domain in industrial design, manufacturing process analysis, material behaviour prediction, etc. This course covers theoretical fundamentals in computational mechanics, including continuum mechanics, finite element methods, and computational plasticity. In addition, the course will also introduce practical skills to applying computational mechanics in research, including multi-physics simulation and advanced finite element simulation techniques.	-	A-F	English	-
MAEG5160	Design for Additive Manufacturing	3	This course provides a theoretical and practical guidance on how to design parts to gain the maximum benefit from what additive manufacturing (AM) can offer. It begins by describing the main AM technologies and their respective advantages and disadvantages. It then examines strategic considerations in the context of designing for additive manufacturing (DfAM), such as designing to avoid anisotropy, designing to minimize print time, and post-processing, before discussing the economics of AM. The course then focuses on computational tools for design analysis and the optimization of AM parts, part consolidation, and tooling applications. Both designing for polymer AM and metal AM and its corresponding design guidelines will be provided. The main benefit of the course is its combined theoretical and practical approach, which provides directly applicable, "hands-on" information and insights to help students adopt AM in their daily practice.	-	A-F	English	-
MATH6022B	Topics in Geometry II	3	Brief subject description: This term we will focus on the geometric and analytic aspects of Ricci flow and Ricci geometry. We will also discuss about the analysis of singularities. We shall assume as prerequisite a working understanding of Riemannian Geometry (at the level of MATH5061), as well as basic knowledge on elliptic partial differential equations (at the level of MATH5022). In particular, prior exposure to other geometric flows is helpful but not absolutely required.	Riemannian geometry	A-F	English	Quota for visiting students: 5
MATH6222	Topics in Numerical Analysis II	3	This course will provide a concise introduction to various computational techniques for solving inverse problems, from classical regularization theory to modern learning based methods.	Linear algebra, real analysis	A-F	English	Quota for visiting students: 5
MGNT6022	Advanced Seminar in Organizational Behavior and Human Resource Management	3	This course is an introduction to theories and research pertaining to individuals and teams in organizations. Topics covered include prosocial and deviant behaviors, creativity and motivation, decision making, affect, trust, justice, leadership, diversity, team dynamics and cross-cultural research.	-	A-F	English	-
MGNT6232	Advanced Seminar in Management Theory	3	This seminar course introduces students to the foundations and applications of major management theories used in organizations and management. The course will begin with an overview of the theoretical paradigms in management and trace the development of influential management theories such as transaction cost theory, agency theory, institutional theory, resource based view, resource dependence theory, and organizational learning theory. The course covers seminal articles of each theory as well as its applications in the fields of management. The focus is on theory development, theorization of management phenomena, and theory extension.	-	A-F	English	-
MKTG7162	Advanced Seminar in Marketing - Analytical Models	3	This seminar course emphasizes on analytical modeling methods in marketing studies. It will cover a wide range of topics including consumer search models, marketing-mix models, competitive marketing strategies, behavioral industrial organization, and research advances in e-marketing. The course will also introduce some basic analytical tools from areas of decision science, economics, and statistics.	-	A-F	English	-
PHYS5420	Classical Electrodynamics	3	This course is intended to provide an introduction to the theory of classical electrodynamics at the graduate level. The emphasis is on the problems of electromagnetic radiation and the covariant formulation of electrodynamics. Selected topics of current research interest will also be discussed.	-	A-F	English	Quota for visiting students: 3

**Course list for Cross-institutional Course/Subject Enrolment Scheme for Research Postgraduate Students
(2025-26, Term 2)
Institution: The Chinese University of Hong Kong**

Course Code	Course Title	Units	Keyword Syllabus or Brief Subject Description	Pre-requisites (if any)	Result Grade	Medium of Instruction	Remarks, if any
PHYS520	Topics in Theoretical Physics (Introduction to Many-body Theory)	3	This course provides an introduction to the basic concepts and theoretical techniques of the quantum theory of many-body systems at zero-temperature as well as at finite temperature. Topics covered include: second quantization, Green's functions at zero-temperature, Green's functions at finite temperature, perturbation theory and Feynman diagram, equations of motion of the Green's functions, linear response theory, and applications of many-body theory in condensed matter physics.	Pre-requisite: PHYS4021 (Quantum Mechanics II), 4031 (Statistical Mechanics), 4050 (Solid State Physics) or their equivalents, or permission of teacher.	A-F	English	-
PHYS5610	Introduction to Biophysics	3	Biophysics investigates biological phenomena using theoretical and experimental approaches derived from physics, such as statistical mechanics, fluid mechanics, and optics. This course provides an introduction to biophysics for postgraduate students with no biology background. Students will be introduced to basic biology and physics concepts relevant to the course, followed by topics including the functions of biomolecules, dynamics of regulatory networks, physics of cellular behavior, and recent development of frontier biophysics techniques. Through this course, students will become familiar with the scope and basic approaches of biophysics research, learn how to perform computer simulations on biomolecules, and develop interest in exploring new territories of biophysics. Students should have undergraduate level thermodynamics and statistical mechanics before taking this course.	-	A-F	English	-
SEEM5020	Algorithms for Big Data	3	In this course, we will focus on important topics to deal with massive datasets. The topics will cover basic tail bounds frequently used for approximation algorithm design, various sketches for efficient summarization of big data, similarity search techniques like LSH for large-scale data, and topics on dealing with matrix data and graph data. Next, we cover different models like the external memory model (for I/O algorithms), the MPC model (for distributed algorithms), the work-depth model (for shared-memory parallel algorithms), and the corresponding algorithms fitted to such modeling. Finally, some topics on sampling-based large-scale graph algorithm designs will be covered.	-	A-F	English	-
SEEM5570	Numerical Methods in Finance	3	This course emphasizes the use of numerical methods for solving financial problems. The numerical methods include: binomial trees, Monte Carlo simulation, stochastic programming, linear/quadratic control models and semidefinite programming techniques. Those techniques will be applied, among other things, to: option pricing, index tracking, portfolio optimization, interest rate models, and asset/liability management.	-	A-F	English	-
SEEM5650	Integer Programming	3	The course deals with theory and algorithms for solving integer and combinatorial optimization problems. Theoretical topics include general concepts such as relaxations, bounds, duality, and total unimodularity. Solution methods cover branch-and-bound, cutting planes, branch-and-cut, Lagrangian relaxations, local search, and metaheuristics. Optimization software and programming languages will be used to implement the methods for solving optimization problems.	-	A-F	English	-
SOCI6003	Advanced Statistical Analysis	3	This course will cover techniques dealing with linear and nonlinear models, including OLS regression, logistic regression and Poisson regression. The objective is to enable students to analyze different types of data. Advanced modeling techniques, such as longitudinal data analysis and event history analysis will also be briefly discussed. Students will be required to use some of these methods to perform analysis on real data.	-	A-F	English	-
SOCI6004	Advanced Qualitative Methods	3	This course examines qualitative methods used in social science research. The course focuses on methods rather than methodology. Its emphasis is on equipping participants with the practical skills, such as case and informant selection, field experiences, interview techniques, writing field notes, and analyzing and writing qualitative data. The course is in a seminar format. Lectures will be interwoven with discussions. Students are also required to conduct a small-scale pilot qualitative research project using the skills discussed in the seminar.	-	A-F	English	-