

NTU-NUS/SMU/SUTD PhD Student Exchange Programme
List of NTU Courses to be offered in Semester 1 AY2026-27

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
ADM	AP7036	Narrative Strategies & Moving Images	3	This course presents an opportunity to explore and understand the connections for narrative strategies and moving images. Through guided readings, discussions and film screenings, students will investigate, explore and formulate their own ideas on narrative strategies in the filmmaker's works. From these investigations they may integrate this knowledge into their own research. By the end of this course, students will have an enhanced appreciation of the topic and how it may be adapted to their own research. The advanced knowledge they attain will further consolidate their ability to integrate effective research questions and will inform their subsequent research methodology and analysis.	Thu, 0930 - 1220	
ADM	AP7046	Design – An Asian Perspective	3	This course presents an opportunity to discover a personal perspective, which may be expressed through a student's work, that has been illuminated by an informed study of Asia within country in that continent. Through lectures, discussions, field trips and hands-on tutorial exercises, students will investigate design as seen from an Asian perspective. This course is to be taken by graduate students under the direction of a faculty member. By the end of this course, graduate students will have an enhanced appreciation of the topic and understand how it is essential to their research and future career. The advanced knowledge they attain will further consolidate their ability to formulate effective research questions and will inform their subsequent research methodology and analysis.	Wed, 0930 - 1220	

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
ADM	AP7055	Art in the Age of the Creative Machine	3	This graduate-level course introduces you to the most recent research and critical machine learning theories in creative fields such as media art, music, performance, and literature. You will review and analyse how machine learning has transformed art and culture by examining and comparing human-based and machine-based art practices and Artificial Intelligence (AI) tools to enhance creativity and production. The course explores the future of creativity, the artist's role, and how machine learning will transform our understanding of what it means to be creative. You will explore cultural, historical, philosophical, and spiritual aspects of creativity and develop unique concepts and artistic prototypes utilising AI's uniquely visual, narrative, and performative potential. This course develops a foundation for students interested in exploring the creative possibilities of AI technologies and how they can assist artists with their creative process for new forms of storytelling, visual arts, and performance.	Mon, 1330 - 1620	
ASE	ES7001	Natural Hazards and Society	3	This is an introductory and general education course that aims to provide you with background knowledge on the range of natural hazards that may affect the human society. You will learn about the geological and geographic setting of different natural hazards, the physical processes that create the hazards, their potential social impacts and how or if the impacts can be mitigated. You will also study key hazardous sites and events and gain an insight into hazard and risk assessment, as well as a thorough understanding of the natural hazards threatening humans.	Mon, 0930hr - 1220hr	Letter-graded
ASE	ES7005	Environmental Earth Systems Science	3	This course is designed to be a comprehensive introduction to the Earth and its systems, including the atmosphere, biosphere, hydrosphere, and solid Earth. The course will focus on the linkages and feedbacks between these systems, and the role of humans in the Earth system.	Fri, 0930hr - 1220hr	Letter-graded

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
ASE	ES7010	Introduction to Geochemistry	4	This course is designed to introduce you the principles of chemistry related to geology (therefore, geochemistry) and their applications to understand processes taking place on and within the Earth. The aim is to provide you with a powerful toolbox and the related skills, more than a static bank of knowledge. You will become familiar with the principles of geochemistry, including analytical chemistry, governing equations and typical applications in the Earth Systems Sciences (e.g., atmosphere, hydrosphere, biosphere, solid earth, anthroposphere). You will have experience to work with geochemistry analytical equipment, learn to collect, organize and present geochemical data, including presenting and writing a research report on a problem of your choice. With this set of tools and knowledge, you will have the mind skills and technical know-hows to answer a range of practical problems in geochemistry, including some that may not have been addressed in the class.	Mon, 1430hr - 1720hr	Letter-graded
ASE	ES7021	Space Geodesy	3	This course is designed to introduce you to the field of geodesy, with a particular emphasis on the Global Navigation Satellite System (GNSS), one of the most important geodetic methods. The course begins with an introduction to the fundamental concepts and principles of geodesy, followed by a broad overview of various geodetic methods and data. You will learn how these methods are used to study geohazards and climate change, along with their strengths and limitations. The course then delves into the diverse applications of GNSS in Earth and environmental sciences, including GNSS deformation for tectonics and volcanology, GNSS meteorology for weather and climate studies, GNSS ionospheric seismology for earthquake and tsunami early warnings, GNSS interferometric reflectometry (GNSS-IR) for measuring sea-level rise and soil moisture, and GNSS Transmissometry (GNSS-T) for studying ecosystems.	Tue, 1330hr - 1620hr	Letter-graded

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
ASE	ES7024	Global Change Ecology	3	Global change drivers, such as pollution, land-use change, biological invasions, and climate change, are reshaping ecological systems across the world. Understanding how these drivers affect ecosystems, communities, populations and organisms is central to modern ecology. This course examines the ecological consequences of global change and the ways in which researchers study these processes across multiple spatial and temporal scales. The course explores key drivers of global change and their individual and combined effects on ecological systems, using examples from a wide range of terrestrial and freshwater ecosystems. Through lectures, data-driven tutorials, and case studies, you will gain experience working with real-world ecological data and develop an understanding of how ecological theory, macroecological patterns, and empirical analyses are used to interpret global change impacts. This course is particularly relevant for environmental science majors and students interested in research, conservation, or environment-related careers in the public, private, or non-governmental sectors.	Mon, 0930hr - 1220hr	Letter-graded
ASE	ES7025	Biogeochemistry	3	This course aims to teach the interplay between biology, chemistry and the environment shape our Earth system. The course will both teach you the fundamental concepts of biogeochemistry during weekly lectures, but will also challenge you to think critically push towards new scientific frontiers. We will cover the biogeochemistry of both terrestrial and aquatic systems and analytical techniques for advancing our knowledge. Throughout the course, we will consider how humans are shaping the biogeochemistry of the Earth, such as via eutrophication, ocean acidification, or effects of rising temperatures. As an advanced-level course, there will be a significant emphasis on reading and discussing original research papers with individual paper presentations. Moreover, as part of the assessment, you will prepare a group presentation on a selected research proposal topic which includes a written proposal, and also write a separate review article or essay on a different biogeochemical topic.	Mon, 1430hr - 1720hr	Letter-graded

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
ASE	ES7028	Experimental Design & Analysis for Ecology	3	This course introduces you to the basic principles of experimental design and analysis of ecological experiments. It introduces you to methods and key concepts for designing and implementing experiments in both the field and laboratory. You will learn how to plan and execute an experiment, key concepts in designing experiments, and how to analyse and present your results. This course builds on the statistical and R skills you should have learned in BS1008, ES0002, and MH311, and you will learn how to apply these statistical methods to real-life ecological field and lab experiments. This course uses R, and assumes some introductory knowledge of statistics and the R language.	Tue, 1430hr - 1620hr, Thu, 1030hr - 1220hr	Letter-graded
ASE	ES7029	GIS and the Earth System	3	In this course, you will become familiar with Geographic Information Systems (GIS) for Earth sciences. You will use an open-source GIS software to perform common tasks required in the study of Earth systems, including importing and exporting datasets, producing scientific-grade maps, and performing basic to advanced geospatial analyses. Given the rapid progress in GIS science and technology, you will also learn how to find online resources to perform tasks required in diverse industries (urban planning, landscape architecture, scientific research). The course is primarily targeted at Environmental Sciences graduate students, with applications to Earth science, ecology, and society.	Tue, 0930hr - 1220hr	Letter-graded
ASE	ES7030	Natural Infrastructure for Resilient Urban Systems	3	The urban population is growing globally, creating or exacerbating major global environmental issues such as climate change and biodiversity loss. To understand the role that cities can play in mitigating these issues, this course aims to equip students with the basic knowledge and tools to analyze urban landscapes using the frameworks of resilience and ecosystem services. We will cover the major challenges that cities face in the 21st century and the role that nature-based solutions –promoting forests, parks, trees, green roofs– can play in addressing these challenges. Through a group project, students will apply this knowledge in practice by articulating the potential for nature-based solutions and presenting an urban ecosystem services assessment for a case study of their choice.	Thu, 1430hr - 1720hr	Letter-graded

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
ASE	ES7033	Introduction to Southeast Asian Biodiversity	3	Southeast Asia is one of the most biodiverse regions on Earth, harbouring extraordinary species richness across terrestrial, freshwater, and marine ecosystems. However, the region is also experiencing rapid environmental change due to land-use transformation, urbanization, and climate pressures. Understanding Southeast Asian biodiversity therefore requires both strong knowledge of regional ecological patterns and familiarity with the methods used to document, monitor, and manage biodiversity. Singapore provides an unusually well-studied entry point into this broader regional context. Despite its small size and urbanized landscape, Singapore retains a diverse range of habitats and approximately 40,000 recorded species. Its biodiversity has been intensively documented through taxonomic, ecological, and conservation research, making it an ideal case study through which to explore biodiversity science in Southeast Asia. This course introduces the biodiversity of Southeast Asia using Singapore as a focal system. Students will gain an overview of major taxonomic groups and ecosystems found in the region, examine the ecological and evolutionary processes that structure biodiversity patterns, and explore how biodiversity data are collected, interpreted, and applied in environmental management and conservation. By the end of the course, students will be able to situate Singapore's biodiversity within broader Southeast Asian ecological and biogeographical contexts, critically engage with biodiversity datasets and literature, and evaluate how biodiversity knowledge informs conservation and environmental policy in tropical regions. This course is made up of 13 three-hour lectures which are taught alongside the undergraduate course ES5008 The biodiversity and natural history of Singapore, and four additional two-hour seminars which are exclusive to this course and taken only by PG students.	Thu, 0930hr - 1220hr	Letter-graded
CCDS	CE6190	Special Topic- Recent Advance on Visual Understanding and Generation	3		Friday, 6.30pm-9.30pm, LT3	No formal exam
CCDS	CE7429	Computational Intelligence: Methods & Applications	3		Tuesday, 10.30am-11.30am, LT13 Friday, 10.30am-12.30am, LT13	Exam - 20 Nov 2026
CCDS	CE7490	Advanced Topics in Distributed Systems	3		Tuesday, 2.30pm - 5.30pm, LT9	No formal exam
CCDS	CE7457	Reinforcement learning	3		Thursday, 9.30am - 12.30pm, TCT-LT	No formal exam
CEE	CV7001	Scientific Computational Methods	3		Tue, 6:30PM - 9:30PM	
CEE	CV7502	Aquatic Chemistry	3		Mon, 2:30PM - 5:30PM	
EEE	EE7204	Linear Systems	3	https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-computer-control-automation#curriculum	Tuesday (6.30 pm to 9.30 pm)	Letter grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
EEE	EE7401	Probability And Random Processes	3	https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-signal-processing#curriculum	Thursday (6.30 pm to 9.30 pm)	Letter grade Limited slots, capped at 10 slots
EEE	EE7402	Statistical Signal Processing	3	https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-signal-processing#curriculum	Wednesday (6.30 pm to 9.30 pm)	Letter grade Limited slots, capped at 10 slots
EEE	EE7604	Laser Technology	3	https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-integrated-circuits-and-microelectronics#curriculum	Wednesday (6.30 pm to 9.30 pm)	Letter grade
EEE	EE7608	Optoelectronics Engineering: Designing The Future With Light	3	https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-integrated-circuits-and-microelectronics#curriculum	Thursday (6.30 pm to 9.30 pm)	Letter grade
IGP-SCElse	GS7401	Fundamentals of Environmental Life Sciences Engineering	8	Experts from SCELSE and highly selected guest instructors will be invited to give lectures, interact and hold tutorials/hands-on session on the following topics: - Emerging concepts of microbial physiology and ecology in biofilms context. - Experimental systems and their design, statistical analyses and interpretation. - Developments in systems biology – metagenomics, proteomics, metabolomics and systems biology. - Applications on engineering processes, human health and the Environment. - Skills and techniques for academic professionals	This module will be taught from 22 June – 3 July 2026 in the form of and jointly as an International Summer Course. Mondays to Fridays 9.00am - 6.00pm	Graded

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
LKCMedicine	MD7001	The Ethics & Practice of Research	3	This course aims to introduce fundamental issues in the fields of history and philosophy of science and practical ethics. It enables students to critically evaluate key arguments in these fields. This module examines the fundamental issues of scientific research. Designed as a core course for PhD students with or without training in critical thinking. It aims to provide young researchers a general grasp of foundation of science from a range of theories and case studies. In addition, it offers an opportunity for students to reflect upon their own roles in a team work or a research project before they enter a laboratory. Students will discern the motivation and objectives of scientific research. Eventually, they will be able to distinguish good and bad scientific practices and the philosophical concerns in lieu of or against them. • Philosophy of Knowledge and Scientific Revolution • Science in Society • Sampling methods & sample size calculation • The loss of knowledge in the information age • Research Application and Commercialisation • Research Involving Animal Subjects • Research Involving Human Subjects I • Research Involving Human Subjects II • Responsible Conduct in Research • Writing Workshop of Research Proposal for IRB and IAACUC • Ethics in Practice • Panel Discussion and Debate • Student-led Seminar presentations	Tuesdays: 11 Aug to 10 Nov 2026 9.30 am - 12.20 pm	Graded
LKCMedicine	MD7109	Professional Skills for Researchers	3	This course aims to enhance personal and career development of graduate students. Our syllabus is designed on the backdrop of the Vitae Researcher Development Framework which defines the knowledge, behaviour and attributes of successful scientists. Through a series of individual and team-based activities, students will learn soft skills such as leadership and people management, creative problem solving, and effective communication for science outreach. Using their own PhD projects as the foundation, students will get practice on project planning, research commercialisation strategy, thesis writing and publishing research. In making informed career choices, we also provide training on resume preparation and understanding both research and non-research roles in different work settings.	Fridays: 14 Aug to 13 Nov 2026 9.30 am - 12.20 pm	Graded

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
LKCMedicine	MD7110	Advanced Genetics in Diseases, Ageing & Cancer	3	The main aim of this course is to explain the key principles of human genetics, ageing and cancer genetics to the graduate student, and to introduce the fundamental concepts underlying existing methods in the field of genetics and genomics. This module will make them better prepared to contribute to the research and development of this trend, as well as research in other basic science and biomedical applications in general. The course will consist of 3 main blocks: • Germline Genetic Variants in Human Diseases: Single-gene disorders, complex genetic disorders, population genetics, aneuploidies, GWAS, prenatal diagnostics • Somatic and Epigenetic changes in Ageing and Cancer: Somatic gene changes, epigenetics, DNA damage-repair, ageing genome, cancer genetics • Genetic Modelling and Understanding Human Diseases: Disease modelling, genome editing, ethics	28 Sep to 2 Oct 2026 8.30 am to 5.20 pm	Graded
MAE	MA6512	Fundamentals of Precision Engineering	3		Thursdays 7 PM - 9:50 PM	
NBS	BR7342	Theory Construction and Experimental Methods in Behavioural Research	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7348	Foundational and Advanced Topics in Regression Analysis: Applications for the Behavioral Sciences	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7344	Advanced Topics in Organisational Behaviour	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7372	Theoretical Foundations of Strategic Management	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7333	Econometrics in Information Systems	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7345	Seminar in Culture Science	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7351	Seminar in Consumer Behavior	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7373	Organization Theory	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7364	Contemporary Issues in Operations Management	3	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NBS	BR7521	AI, Digital Economics, and Financial Technology (Part 1)	1.5	S1 https://www.ntu.edu.sg/business/admissions/phd-programme/curriculum/academic-calendar		Letter Grade
NCPA	PM6151	International Development and Global	3	This course aims to equip you with a critical understanding of the intricate relationship between international development and global governance, exploring how global	TBC	Grading
NCPA	PM6145	Contemporary Politics of Migration Governance	3		TBC	Grading
NCPA	PM6136	Cost Benefit Analysis	3		TBC	Grading

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MAE902	Language Acquisition Studies	4	This course examines theories of language acquisition (first, second, and bilingual) from psycholinguistic and sociolinguistic perspectives. A range of factors that affect the nature and route of language acquisition will be considered (e.g., age, cross-linguistic influence, linguistic environments, cognition, identity, power, etc.). A solid understanding of the nature of language acquisition is expected to provide good grounds for designing language teaching pedagogy.	Wed, 1800 - 2100	Letter Grade
NIE	MAE903	Sociolinguistic Perspectives on the Classroom	4	This course examines language in its social context, including language use in multilingual communities, social reasons for language change, language planning, pidgin languages, linguistic variation based on geography, social class, and gender, and issues in cross-cultural communication. It also considers the impact these concepts have on Singapore classrooms	Thu, 1800 - 2100	Letter Grade
NIE	MAE904	Language Teaching Methodology	4	In this course, we explore the rationale and principles behind the paradigm shift in language teaching methodologies and evaluate their appropriacy for the local teaching context in Singapore. Participants will learn about the relationship between methodology and syllabus design in planning appropriate programmes for teaching the different language skills	Tue, 1800 - 2100	Letter Grade
NIE	MAE909	The Culture and Conventions of Academic Writing	4	In this course, we explore the linguistic and cultural conventions of academic writing, drawing on examples from postgraduate theses / dissertations, research papers, and published journal articles. Participants will learn about different traditions in the field of academic writing research, read and discuss research on the complex issues surrounding academic literacy, examine the socially-situated nature of academic discourse conventions, and be guided to critically analyse genuine academic texts to observe the discourse practices valued by the academic discourse community, for example, in terms of reviewing literature, organising arguments, supporting claims, citing sources, and projecting a credible authorial persona. In essence, the course provides a sound theoretical introduction to the field of academic writing research, offers insights into the kinds of writing that are valued at postgraduate level, and constructs a space in which participants can unpack, problematise, and question academic conventions.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MAE912	Literacies in Society	4	Reading and discussion focus on the diverse nature of literacy across time and space and different communities, the social, cognitive and linguistic aspects of becoming literate, the nature of, and differences between, school and out-of-school literacy, the variable access groups within societies often have to school literacy, and the dramatic shifts in the character of literacy, particularly with the impact of various late twentieth century technologies. In each area, the concepts and findings of the readings will be connected to literacy practices in the multiracial and multilingual Singapore context.	Mon, 1800 - 2100	Letter Grade
NIE	MAE919	Second Language Phonology	4	The course will give students the ability to formulate informed opinions about the rules and features of L2 phonology, how they differ from L1 phonology, and whether or not there are universal patterns and processes regardless of the languages involved. Further they will be able to determine to what extent it is possible to alter ones phonology and whether this is a desirable or advisable path to follow for language learners. These outcomes will be achieved by a process of student analysis of their own speech via close phonetic transcription in IPA assisted by the use of phonetic analysis software, and further by students engaging in a process of attempting to alter their own speech habits in order to adopt a target L1 phonological feature.	Tue, 1800 - 2100	Letter Grade
NIE	MAEL911	Interdisciplinary Thinking for Educational Leaders	4	This course provides participants with an overview of the current state of thought surrounding interdisciplinarity. There is growing realisation that many of the problems societies encounter today do not show up pre-packaged as a specific disciplinary problem. In schools, this has led to an interest in multi-, inter-, or even trans-disciplinary approaches to teaching and learning. This course will introduce the education leader to the pertinent issues surrounding disciplinarity and associated combinations through an investigation of knowledge forms in Science Technology Studies (STS), and Design, as exemplars. Many of the contemporary issues we encounter today require expertise in diverse disciplines in order to understand and resolve; most single disciplinary approaches will be inadequate. Through an exploration of several topics pertinent to schooling, participants will appreciate the complexities of disciplinaritypower relations, epistemology, and the wisdom dimension in managing these complexities. Disciplinary issues, as with leadership, is not to be governed by an excessively rule-based form of thinking. Rather, it must be approached with discernment and wisdom, and this course will benefit leaders who seek it.	Tue, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MAEL920	Key Issues in Education Policies and Reforms	4	This course introduces educators in various fields of work to several key issues in education policies and reforms. These issues include the financing and control of education, language-in-education policies and curriculum contestation. The course adopts an international perspective in order that educators will understand how these key issues are common to education systems around the world. The political, cultural and social contexts of education may differ, but nevertheless these issues confront schools, teachers and students. The course will examine how the education policies and reform efforts are intricately linked to the wider contexts within which education systems are situated. Examples and readings used will cover a variety of national settings. Educators will be able better to understand the complexity involved in policy decision making and implementation.	Wed, 1730 - 2030	Letter Grade
NIE	MAEL930	Strategic Leadership and Educational Transformation	4	The course is designed to provide participants with a deep understanding of the critical role that leadership plays in driving transformative change and innovation within educational institutions. It explores the role of strategic leadership in shaping educational transformation, addressing contemporary challenges, and driving institutional growth (including student learning development and growth) in response to evolving societal, environmental, economic, technological, and policy demands. The course will cover key aspects of educational leadership such as leadership theories, education reforms, strategic management frameworks and planning, and change management.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MAEL940	Theory and Practice of Teachers' Professional Learning	4	Considering the demands for continual improvements in the school curriculum to achieve diverse, holistic and equitable learning outcomes, the importance of teacher professional development is now in a greater position to make impactful transformations in teaching. This is consistent with the increasing importance placed on learning and lifelong learning especially in view of the knowledge and digital economy. Current literature on teacher professional development, or professional learning, suggests the need to go beyond the usual models of professional development, which regard learning as special events that are restricted to three or four days during the school year, graduate courses and qualifications, and accumulation of time-based activities even though their importance remains to be relevant in certain contexts and situations. New conceptions of teacher professional development / learning, along with their theoretical and philosophical justifications, are now being considered. These include notions of lifelong learning, job-embedded learning, inquiry-based learning, reflective-based learning, community-based learning, and with the recent pandemic crisis, learning via digital environments (e.g., more extensive usage of genAI). Concomitantly, certain models of teacher professional development / learning have been proposed. These include reflective practice, professional learning communities, communities of practice, lesson study, and action research among others. This course will provide the learning space for you to consider, contextualise and critique the theory and practice of teacher professional development / learning. You will also become familiar with the current developments pertaining to teacher professional development, and appreciate the relationship between professional development / learning, leadership and school improvement. This course is suitable for professionals actively leading and managing teams, organizations and institutions on the professional	Mon, 1800 - 2100	Letter Grade
NIE	MAS912	Heritage, History and Culture	4	This course aims to intellectually equip you with the methods and practices that would enable you to make your own assessments about various aspects of (in)tangible heritage. This course intends to engage students in making practical assessments of the tangible built heritage and the intangible heritage of cultural practices and traditions. In the course, students examine the heritage value of historical sites and landmarks as well as cultural traditions. Students do a major case study of a place or a cultural practice that they consider to be of heritage value. The significance and meaning of what constitute heritage is covered. Students consider why some historical sites and cultural traditions and not others are regarded as essential for school field trips and tourism. The question of how the public perceives the past as it is presented in museums is also analysed.	Mon, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MAS937	Ancient Civilizations of the East	4	The course will provide a survey of the ancient civilizations of the East, namely China, India, and Southeast Asia. Through a close reading and examination of (translated) primary sources, you will be inducted in a critical discourse of not only issues (polity, society, culture and economy) in classical period societies. An examination of exhibits/artefacts from the museum will also allow you to make specific linkages to issues in heritage and (ancient) globalization.	Thu, 1730 - 2030	Letter Grade
NIE	MAS945	Travel and Tourism in Asia and Beyond	4	Tourism is arguably the largest and most important industry in Asia. New and emerging trends in the region such as increasing mobility of ordinary people, rise in ageing population, rapid urbanisation, and growing emphasis on health and wellness coupled with the rapidly evolving nature of travel call for a serious examination of the subject matter. Yet, it is important to recognise that Asian Tourism does not exist in a vacuum; it is part and parcel of a global tourism system and is in a symbiotic relationship with the rest of the globalised world. In this course, you will examine major trends in travel and tourism, focusing specifically on Southeast and East Asia, but also drawing on case studies worldwide. Further, you will learn about the political geographies of tourism spaces and landscapes, and the changing relationships between state, civil society, and market as well as their influence on power relations in tourism.	Wed, 1730 - 2030	Letter Grade
NIE	MAX902	Paradigms and Practices of Assessment	4	This course seeks to provide strong fundamentals for participants to acquire a critical level of foundational assessment literacy, engage with different paradigms of knowledge, and be proficient in the application of key assessment practices. Assessment is posited as the object of study, and also as the key driver for designing the structure, pacing, and pitching of the course content. Participants are required to grapple with a range of assessment concepts, some of which are not literally nor easily reconcilable, and to distil a conceptual clarity from which they may interrogate their own assessment practice contexts.	Wed, 1800 - 2100	Letter Grade
NIE	MAX911	Item Response Theory	4	The student will learn the theoretical foundation for the construction of tests and analyses of test scores. It introduces the concepts and techniques of classical test theory and item response theory. The student will: 1. Examine the use and the impact of these theories in achievement testing, large-scale testing, and comparison of student achievement across different educational and social settings. 2. Learn to use computer programmes to analyse test data. 3. Discuss applications of these theories including objective measures, detection of item- or test-bias, differential item functioning, and computerised adaptive testing.	Mon, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MAX914	Assessment and Development of 21st Century Competencies	4	The 21st century is often described as a VUCA world one that is volatile, uncertain, complex, and ambiguous. With new demands coming from the 21st workplace, it is thus imperative for educators in various educational institutions to develop students capacities to match the needs of the students future workplace. This thus indicates an imperative need to change the way educators craft their lessons and learning tasks so as to provide students with ample opportunities to gain authentic learning experiences and enable the transfer of relevant knowledge and skills from their classrooms to solve real world problems.	Mon, 1800 - 2100	Letter Grade
NIE	MAX922	Assessment Feedback for Improvement and Learning	4	This course seeks to provide strong fundamentals for participants to acquire critical awareness of key issues and core tenets of instructional feedback as a key assessment practice. Feedback is discoursed as integral to pedagogy and curriculum, and posited as the primary and pervasive dialogue in which learners can identify and address their learning gaps with teachers and peers. The multi-faceted dimensions and purposes of feedback practice are presented, including feedback as pedagogy and/or partnership, and feedback for performance, receptivity, and resilience.	Tue, 1800 - 2100	Letter Grade
NIE	MAX924	Theory and Practice of Authentic Assessment	4	This course aims to provide participants with 1) conceptual clarity on authenticity 2) principles for designing quality authentic assessments that yield valid information of a learner's ability; 3) a critical perspective of the role of authentic assessment within Singapore's educational system.	Mon, 1730 - 2030	Letter Grade
NIE	MCL902	Topics on Chinese Language and Its Teaching	4	Global developments in the teaching of Chinese require educators working in this area to further their understanding on the latest trends in the teaching of Chinese as a second language. In addition, Chinese teachers should possess the ability to apply the latest methodologies and theories in the innovation of their pedagogy, on top of having a strong foundation in their knowledge of the Chinese language and its linguistics. This course focuses on the theories and methodologies in the teaching of Chinese as second language. The syllabus includes the teaching of Chinese phonics, characters, lexicon, grammar, rhetoric and other related knowledge. The course consists primarily of project-based learning. Depending on the needs of the class, the course instructor has the flexibility and discretion to plan and customize the teaching materials in order to underscore important learning points and to reinforce difficult concepts.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MCL907	Chinese Language Curriculum Design and Instructional Materials Development	4	Language curriculum design and the development of instructional materials should cater to the differing learning needs of individuals in different regions. The Chinese language curriculum in Singapore uses a uniform set of syllabus and instructional materials for all students. Hence, during the teaching process, many teachers find that they need to adapt these to suit the varying abilities of their students.	Tue, 1800 - 2100	Letter Grade
NIE	MCL910	Chinese Language Testing and Assessment	4	Testing and assessment forms a critical component of language learning and Chinese language curriculum. It is not only closely related to the teachers pedagogy and students learning strategy, but also determines and impacts learning outcomes for both short and long terms.	Wed, 1800 - 2100	Letter Grade
NIE	MCL911	Application of Information and Communication Technologies in Teaching and Learning of Chinese Language	4	Immersing Information and Communication Technologies (ICT) into Chinese Language classroom is not just about employing digital learning materials or references to aid traditional teaching. More in-depth professional development is required to improve teachers design capacity in engendering different forms of teaching enabled or enhanced by ICT, especially communicative approaches, socio-constructivist learning, and extending language learning beyond the classroom. Moreover, in the context of globalisation in the 21st century, the usage of languages in our daily lives and work environments differs from the past centuries. It is crucial to nurture the students new literacies in utilising Chinese Language for effective communication in the cyberspace, particularly in the new media environments. We need to have a closer link to the 21st century teaching and learning with ICT, providing the natural context for the development of the new literacies.	Mon, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MCT901	Curriculum: Theories and Issues	4	The field of curriculum is characterized by a vigorous debate and a plethora of compelling arguments. This introductory course invites participants to examine major issues and debates in the field of curriculum studies, and to bring these ideas to bear on curriculum developments in Singapore. The course is structured around the following fundamental questions: How do we understand curriculum and the work it does? What knowledge is of most worth and what should schools teach? How should this be taught and for what reasons? How does the curriculum reflect a society's understandings of its past as well as visions and aspirations? Participants will be introduced to historical development, socio-economic assumptions, challenges of globalization and the implications of these and other factors on curricular reforms. As participants consider various approaches to exploring these questions, these insights will also guide their study of key curriculum issues in Singapore. The latter include the purposes of education, selection and organization of knowledge, access to knowledge, and methods of delivery in an increasingly global context. These analyses will be done in relation to both theory and practice, and with references to implementation issues in schools and classrooms.	Tue, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MCT902	Crafting the Curriculum	4	The process of analysis will reveal that curricula are by necessity always incomplete and imperfect everything that is included (topic, activity, question, component, material, assessment, etc.) means that something else has been excluded. This being the case, students will suggest refinements to the curriculum they have analysed, based on their understanding of the needs This course is an introduction to curriculum development. The underlying framework for the course is that curriculum building is a process that requires ongoing study and reflection about curriculum and the practice of teaching. Central and perennial curriculum questions explored are: What knowledge is of most value and worth? How is the learner and learning viewed? What is the role of teachers in creating and enacting curriculum? The process of analysis will reveal that curricula are by necessity always incomplete and imperfect everything that is included (topic, activity, question, component, material, assessment, etc.) means that something else has been excluded. This being the case, students will suggest refinements to the curriculum they have analysed, based on their understanding of the needs of learners, the socio-political milieu, and the moral and ethical dimensions of schooling.	Mon, 1800 - 2100	Letter Grade
NIE	MCT903	Assessment in Education and Learning: Theories, Tensions and Issues	4	Understand the central and pivotal role of assessment practices in constructing and enacting educational outcomes and experiences. Critically examine how assessment design, judgments and feedback practices construct the process and outcomes of learning. Develop an awareness of assessment as the primary mechanism for determining merit, and an important discourse for addressing social justice issues.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MCT904	Understanding Teachers and Teaching: Theory and Practice	4	This course explores two intertwining themes: (1) Teacher as the curriculum maker, which explores from the interpretive perspective on how teachers acquire the knowledge, skills, and values in forming their identity in situated teaching practices and curriculum making. How do we understand the composition of teachers knowledge, practice, and skills in making curriculum alive? What counts as teacher quality in an era of accountability? How do teachers provide and practice leadership in curriculum making? How do teachers learn at different points in the teachers professional continuum and in different contexts? (2) Teaching as a practice, one that has been historically understood by scholars, practitioners, and policy makers from a range of theoretical perspectives. What does it mean to conceptualize teaching as a practice situated in relation to curriculum, assessment and learning? What are the many ways people have thought about teaching as a practice, and what are the consequences of those perspectives for how we understand teaching? Who can create, evaluate, and critique knowledge about teaching? The course will introduce some major frameworks that have been used to guide research, policy recommendations, and the work of teachers and teaching. We consider the issues of teaching and teachers in an international context, drawing on research from Singapore and other countries. Some of our texts and video materials we will use will give us repeated opportunities to consider education in China, France, Japan, and the U.S. While they dont constitute a central focus of the course, they will give us some chance for shared discussion that draws on multiple and sometimes conflicting descriptions and interpretations of teaching and teacher in a particular setting. Thus, we further pursue the context-related questions when we make the familiar strange in such an international perspective: In what ways is	Mon, 1800 - 2100	Letter Grade
NIE	MCT905	Theories and Perspectives on Learning	4	This is a reflection-intensive, peer-learning course that offers opportunities for students to interpret and discuss some of the established theories and perspectives on how people learn. It will cover ideas from behaviorism, cognitivism, constructivism, and social constructivism through key topics such as meaning-making, verbal understanding, inquiry learning, representations of knowledge, the process of knowing, situated cognition, and learning in community.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MCT913	Differentiating Curriculum and Teaching for Diverse Learners	4	Contemporary deliberations about the school curriculum have tended to privilege other stakeholders and marginalize students. Unless teachers are able to take seriously what students already know and believe, any innovation in curriculum or pedagogy becomes futile. All students deserve rich learning experiences. This course is designed to encourage teachers and school leaders to examine their assumptions about curriculum, teaching and learning, and to develop a critical understanding of different student learning needs in the regular classroom. Participants will gain an understanding of the reasons and assumptions underlying differentiation. Through the readings and discussion, participants will develop an appreciation of the diverse characteristics of students who learn at different pace as well as study a variety of curriculum options such as those of content and implementation of differentiated units and lessons that optimize learning for students. This course will examine ways that classrooms can effectively differentiate curriculum and teaching to address the complex challenges of meeting the diverse learning needs of students. These will include notions of culturally responsive pedagogy, and the use of technology. Participants will learn to use research-based tools to uncover students experiences and challenges with the curriculum and use curriculum design models in planning appropriate and defensible differentiated curriculum units	Tue, 1730 - 2030	Letter Grade
NIE	MCT921	Theory and Practice of Authentic Assessment	4	This course aims to provide participants with a sound grasp of the theoretical underpinnings of authentic assessments as well as practical skills needed for designing authentic assessments. More specifically, it aims to provide participants with 1) conceptual clarity on authenticity 2) principles for designing quality authentic assessments; 3) a critical perspective of the role of authentic assessment within Singapore's educational system. The course will be conducted through discussions, group presentations, online forums, and hands-on activities. Participants are expected to critically appraise literature on authentic assessments and to develop an authentic assessment that will enhance the learning of their students.	Mon, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MCT931	Narrative Inquiry in Curriculum, Pedagogy and Professional Development	4	Narrative inquiry is used to enable teachers to examine, reflect on and study their curriculum work, pedagogical practice and personal and professional learning through telling and retelling and studying their own work- and life-related experiences and stories. The course provides both conceptual foundations and experiential learning for teachers to make meaning of their personal and professional lives and identity. It aims to empower course participants to own and draw from their lived experience for practical wisdom and knowledge creation by learning to think and live narratively.	Thu, 1800 - 2100	Letter Grade
NIE	MCT933	Affirming Diversity and Culture in Teaching and Learning	4	Singapore's societal fabric has seen great changes within the past decade as the waves of globalization lap against our shores. In terms of demography, there has been evidence of increasing diversity over the past decade with rising non-resident population, trans-national marriages, and divorce rates. At the same time, home language patterns are also shifting. These demographic and social changes are consequently reflected within our school population. Over the past 10 years, the Ministry of Education has been acknowledging that students are coming from increasingly diverse backgrounds and emphasising the need to take into account student diversity in teaching and learning practices. Addressing student diversity is pertinent for several reasons. Firstly, it helps to narrow gaps in student achievement that may arise on the basis of student differences. Secondly, it can promote intergroup understanding that is critical to becoming engaged citizens in a democratic society. Thirdly, it enhances student psychological and emotional belonging as their identities are acknowledged and accepted. This course aims to help participants understand the different ways in which their learners are diverse, on top of learners' different ways of cultural being. It engages participants in deep exploration of the complex meaning of culture and the influence of sociocultural theories on learning and teaching. Through critical reading of literature and reflection, participants are encouraged to explore reasons for how and why learner diversity and culture are acknowledged, ignored, or contested. In turn, the course compels participants to consider the implications of diversity and culture on teaching and learning as well as propose ways of incorporating learner resources into their teaching. Yet, prior to recognizing and engaging in work around learner	Mon, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MDP901	Social and Emotional Development and Assessment	4	This course is one of the two core (required specialization) modules in the Master of Education (Developmental Psychology) programme. The course contains major and classic social and emotional development theories that are fundamental to the participants before they take on other more specialized courses in the programme. It also introduces how to assess childrens social and emotional development.	Tue, 1800 - 2100	Letter Grade
NIE	MDP902	Children Cognitive Development and Assessment	4	Childrens cognitive development is the emergence of the ability to process information, think, and understand. Understanding childrens cognitive development is essential for curriculum development, effective teaching, and good policy making.	Wed, 1800 - 2100	Letter Grade
NIE	MDP903	Counselling Children and Adolescents	4	Teachers and other helping professionals who might not have the knowledge about basic counselling concepts and skills are often at a loss when faced with children or adolescents who need psycho-social and emotional support. This course provides one with information and skills needed to do basic counselling in settings such as schools and other educational centers.	Tue, 1800 - 2100	Letter Grade
NIE	MDP904	Motivation, Volition and Learning-in-Action	4	This course is designed to empower teachers, coaches, supervisors or parents to motivate their charges and to develop their volition to love, to will, to think and to make personal improvements so that they become happy and well-adjusted members of the community. The course examines biological-psychological research and theories related to enhancing motivation and volition in young and adult learners. It helps participants to understand why some renowned persons drive themselves to success while others seem to remain in mediocrity. Participants will engage in research practices and reflections as they relate their experiences to theories and hypotheses in daily practices based on the framework of Knowledge-Volition-Action.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MDP907	How to Nurture Creative and Happy Learners	4	It has been said that we live in the VUCA world Volatile, Uncertain, Complex, and Ambiguous. Creative individuals will cope well in the VUCA world, due to their capacity to think of original solutions to complex and challenging problems. At the same time, via incremental improvement or radical transformation of the VUCA world they live in, creative individuals can live happy, enriched and meaningful lives in society. This module infuses its participants with relevant KSAOs (Knowledge, Skills, Abilities and Others) to nurture creative and happy learners in the Singapore context. It achieves this goal by immersing participants in the theoretical and empirical research on creativity and happiness. By mastering this psychological domain of knowledge, participants will become skillful facilitators of creative and happy learners in the classroom, and thereby prepare their students for living and thriving in the VUCA world.	Tue, 1800 - 2100	Letter Grade
NIE	MDP909	Assessment and Development of 21st Century Competencies	4	The 21st century is often described as a VUCA world one that is volatile, uncertain, complex, and ambiguous. With new demands coming from the 21st workplace, it is thus imperative for educators in various educational institutions to develop students capacities to match the needs of the students future workplace. This thus indicates an imperative need to change the way educators craft their lessons and learning tasks so as to provide students with ample opportunities to gain authentic learning experiences and enable the transfer of relevant knowledge and skills from their classrooms to solve real world problems.	Mon, 1800 - 2100	Letter Grade
NIE	MDP912	Gestures in learning and development: theory, research, practice	4	In recent decades, there has been a growing interest in the role of hand gestures (e.g., pointing, creating a shape with the hands) in learning and development. This course examines the research on hand gestures across a variety of educational contexts for children and adolescents, looking at when a teachers gestures can affect learning and what students gestures are telling us. This course introduces methods of classifying gestures and provides a broad overview of how gestures can help learning. This course will help you to make sense of students gestures from an intentional, theory-based perspective and provide you with knowledge on evidence-based practices. The course is for all students who are interested in non-verbal communication, body language and learning.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MEA901	Research and Issues in Art Education	4	This course examines the history of the discipline and explores various methodologies, critical theory, and resource material for art educational research. This involves techniques of scholarly and critical writing and evaluation of bibliographic sources. The intention is to assist candidates locate their own approaches to art education within the context of ideas and to understand the orientation and significance of contemporary art education theory and practice.	Tue, 1730 - 2030	Letter Grade
NIE	MEA903	Arts Education and Technology	4	In today's connected world, teaching and learning in the Arts classroom has changed. Through both theoretical, practical and research informed work, participants will consider the different ways technology has shaped the classroom practices in the arts today. Participants will also learn to integrate theories, technologies, learning designs and assessment modes to achieve the intended outcomes for students. This course would appeal to graduate students interested in the arts, education and technology who want to further their knowledge and skills in these areas whilst potentially widening their future career opportunities.	Thu, 1730 - 2030	Letter Grade
NIE	MEC901	Child Development (0-8 years)	4	The MEC901 Course which is the first specialisation course in the MEd (EC) Program, provides the foundation for all the other specialisation courses. This course will help participants conceptualize children's development across infancy, pre-school and primary school years (birth to 8 years) through the critical review of/reflection on various developmental theories, models, approaches and scholarly works.	Mon, 1730 - 2030	Letter Grade
NIE	MEC902	Issues and Trends in Early Childhood Education	4	This course aims to empower participants to explore and reflect critically on key current and historical issues and trends underpinning the developments of early childhood education (ECE), and through this, to examine and discuss how ECE in the Singapore context can benefit from developments in the wider field, and yet stay relevant to its contextual demands.	Tue, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MEC903	Research Investigations in Early Childhood Education	4	This course introduces students to the research design process in early childhood related topics. This course is essential in preparing students for their dissertation and MMM800 (Critical Inquiry) course which would require them to conduct a small research study within a single semester. This course provides the necessary preparation by allowing students to craft a coherent research design gathering literature, sifting through theories, identifying a focused topic and honing in on the study's purpose as well as selecting the specific research methodology for their study which is centered in the early years and commonly used in early childhood education.	Thu, 1730 - 2030	Letter Grade
NIE	MEC906	Curriculum Design and Development in Early Childhood Education	4	The course explores the theoretical and practical nature of various early childhood curriculum approaches across time and context. The discussion will closely examine the wide array of paradigms with the underlying conceptions about children and education in light of a range of practical implications. In order to be able to prepare to be curriculum developer, theorizer, and advocator, the course enhances participants capacity to utilize multiple critical lens to rethinking and doing of educational complexity, equity, and diversity.	Wed, 1730 - 2030	Letter Grade
NIE	MEC909	Professionalism in Early Childhood Education	4	This course is designed to review and reflect on current understandings of professionalism in the EC field both globally and locally. It explores the twin concepts of leadership and professionalism with reference to early childhood education in the Singapore context. It also explores how leaders can create avenues for professionals to innovate, enriching optimal learning and meeting the needs of children and their families.	Wed, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MEC910	Pedagogy in Early Childhood Education	4	This course is designed to equip early childhood educators who are in teaching and mentoring roles to effectively design the curriculum and content to instruct adult learners who are preparing to enter the early childhood workforce. It will introduce participants to adult learning theories and scaffold their skills in teaching and instructing adult learners. The course enables participants to understand what motivates adult learners and be equipped with the needed skills to create content and instructional design that is conducive for the adult learner who is teaching young children. Hence, the course leverages on the participants existing knowledge on how young children think and learn. Participants will draw information from the various courses that they have previously undertaken, (e.g. child development, curriculum, assessment, diversity, etc.) for this course on Pedagogy in ECE. This course also has a practical element, which seeks to improve the participants instructional design and delivery in the context of teaching an early childhood course to adult learners.	Fri, 1730 - 2030	Letter Grade
NIE	MED903	Elementary Statistics for Education	4	This course provides the MEd (Educational Assessment) graduate student with the skills and understanding of elementary statistics and their applications in the social and behavioural sciences. Basic statistical literacy is required in a critical reading of research literature and in conducting sound research. It is essential knowledge for a MEd(Educational Assessment) graduate working in the field of educational measurement and evaluation	Tue, 1800 - 2100	Letter Grade
NIE	MED905	Applied Regression Analysis	4	This course is designed to equip higher degree students as well as teachers with the basic concepts and methods of regression analysis. The course will cover how regression analysis can be applied to answering research questions, in particular, in the educational context. The students will get hands-on experience in running relevant statistical software to run regression analyses to analyze data.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MEL901	Language and Literature Education	4	Historically, literature and language have not been dichotomous terms. Literature as a concept emerged in the fourteenth century and its latin root is littera denoting a letter of the alphabet. In this sense literature was tied to literacy or, more specifically, the ability to read. It was only later that literature became connected to the concept of taste involving the ability to read particular kinds of text and the discipline emerged in distinction from fields of language and linguistics. In this course, we seek to examine historically the disciplinary schism between English language and English literature and explore socio-cultural, linguistic and textual theories advocating an integrated approach to English language teaching. In the process, we aim to problematize the dichotomies between reading and writing, literacy and literariness, the functional and the aesthetic.	Tue, 1800 - 2100	Letter Grade
NIE	MEL902	Analyzing Literature and Language	4	This course introduces participants to the study and analysis of styles in canonical and non-canonical literary texts, as well as other similarly creative texts such as advertisements, using fundamental linguistic and literary tools. It is an interdisciplinary course spanning the borders of English language and English literature, which are presently framed in the school curriculum as two subjects even though they are mutually constitutive fields of inquiry. As education expands globally and exponentially, it is imperative that both language teachers and literature teachers promote learners who are able to systematically identify and critically evaluate or appreciate the qualities of language used for particular effects in a plethora of creative texts which exist around them. Participants in this course will have opportunities to examine and describe the forms of texts, interpret their communicative functions and offer evaluations of the textual effects created, supported by language-based evidence.	Mon, 1330 - 1630	Letter Grade
NIE	MEL914	Teaching Oral Communication: Current Theories and Approaches	4	The aim of the course is to introduce contemporary theoretical notions and pedagogical frameworks and approaches related to teaching listening and speaking such as the metacognitive, cognitive and social processes involved in oral communication, the principles and procedures for evaluating listening and oral competence, and the incorporation of multimodal and literary texts. You will explore how to apply the ideas covered and discussed in this course in your own teaching context, which are also relevant to, and can be adapted for, the teaching of other languages in both first and second language contexts.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MEL920	Creative Writing in the Classroom	4	Creative writing, whether in fiction or non-fiction, is part and parcel of the English language curriculum in Singapore and around the world. The course will engage teachers of English language and literature in the very processes of creative writing that they would have their own students engage in. Practical experience in, along with theoretical and research knowledge of, the craft of writing, can help teachers reflect critically on their own pedagogical approaches in the composition classroom.	Wed, 1730 - 2030	Letter Grade
NIE	MEL921	Literature, Culture and Education	4	This course attends to the theory and practice of English education in relation to literary studies, raising questions that resist simple answers: How are the aims and objectives of English studies bound up with the processes and practices of a given culture? How are English Literature curricula and pedagogy implicated in the ideological structures of formal schooling? To what extent should traditional notions of literature education change amid the realities of globalization in the digital age? How do English curricula valorize and/or marginalize students and teachers cultural identities on the basis of language, race, ethnicity, class, gender, and sexuality? Are English teachers complicit in privileging the cultural paradigms of a western literary education? How can literature education become a vehicle of cultural and political critique? These questions will be addressed in relation to the challenges of critically performing and conforming to the Literature Education curricula in Singapore schools.	Tue, 1800 - 2100	Letter Grade
NIE	MEL922	Teaching Shakespeare	4	This is a graduate course on acquiring knowledge and understanding of as well as how to teach the works attributed to the poet and dramatist William Shakespeare and a number of his contemporaries. Students will be introduced to a representative but also canon challenging range of Shakespeare texts complemented by a range of scholarly and pedagogical texts with the goals of making teachers more informed, better readers and teachers of Shakespeare texts. Each week each Shakespeare text will be taught through the lens of a particular literary theory. Upon completion of this course, students should be able to choose appropriate texts to teach their students, as well as choosing and planning appropriate strategies for introducing local students of any level to Shakespeare. Teaching involves teacher guided but active student lead seminars, each week by a different student, culminating in a symposium concerning new ideas for teaching Shakespeare in new and inspiring ways in the local context. Students will have a range of opportunities to think critically, share and debate ideas, and pedagogical strategies, through class discussion, group work, pair work and online activities.	Mon, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MEL928	Children's Literature for the English Classroom	4	This course offers an exploration into the world of childrens literature from different theoretical perspectives. It situates childrens literature as sites where issues of class, race, gender, ethnicity, nationality and identity are constructed. Through applications of literary theory, the course offers opportunities to engage critically with texts in relation to readers and contexts. The course will also introduce scholarship from critical discourse and cultural studies revealing childrens stories as not only a means of enculturation but also as a platform to develop the critical and creative imagination.	Thu, 1800 - 2100	Letter Grade
NIE	MEM909	Contemporary Issues in Strategic Educational Management	4	This course reviews the evolution of strategic management. The course will also be explored through the ten schools of strategic management. Planning and traditional strategic management assumes that detail plans and structure determines strategy, which leads to performance consequences. Issues with traditional strategic management will be explored through the changing educational landscape in Singapore. As the educational landscape in Singapore continues to change rapidly, a new type of strategic school leader is needed. The new strategic leader is one who can cope proactively with a dynamic, complex, increasingly competitive and sometimes uncertain context. Because defining success for schools will also change with the changing educational landscape, the strategic leader must review assumptions that lead to school practices and challenge these assumptions in view of the changing educational landscape. This view of educational success will require relevant strategies to develop staff, incorporate relevant learning programmes and structures and promote learning opportunities for students that will future-ready them in the changing landscape. The strategic choices for schools are to pursue goals beyond the school and include global, local and individual goals. Hence, strategy must be multi-dimensional and future oriented.	Thu, 1800 - 2100	Letter Grade
NIE	MES902	Adapted Physical Activity & Sports	4	Individuals with special needs, like everyone else, need to be involved in regular physical and sporting activities. They can, and should, be equipped with the necessary skills and knowledge to participate in modified and/or regular games and sporting events. This course introduces students to the area of adapted physical activity/education and to the diverse disability conditions affecting individuals. There will be opportunities for hands-on practical sessions to explore different adaptations (equipment, rules, and instructions) and types of adapted physical activities sports that can cater to the needs of individuals with special needs.	Tue, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MES904	Biomechanics of Sport and Exercise	4	This course will equip students with an advanced level understanding of biomechanics. Topics covered include: kinematics, kinetics, biomechanical instrumentation, data acquisition, data processing and interpretation, and research approaches in biomechanics. Students will perform laboratory work using state-of-the-art equipment, alongside lectures and tutorials. Students will also get an opportunity on a practical problem as part of the research experience. A mix of face-to-face interactions, online learning and group work is implemented in this module. It is intended that students be guided to holistically integrate the knowledge presented throughout the module.	Fri, 1800 - 2100	Letter Grade
NIE	MES911	Psychology of Physical Activity	4	This course will equip students with an advanced level understanding of psychological knowledge about physical activity for health. Topics covered include: physical activity correlates and theories, physical activity behavioural change, benefits of physical activity to health, measurements of physical activity, data acquisition, data processing and interpretation, and research approaches in physical activity psychology. Students will have opportunities to work on physical activity measurements and data interpretation as a part of research experience, alongside lectures and tutorials. A mix of face-to-face interactions, online learning and group work is implemented in this course. It is intended that students be guided to holistically integrate the knowledge presented throughout the course.	Wed, 1800 - 2100	Letter Grade
NIE	MES914	Trends & Issues in Physical Education & Sport	4	This is an advanced subject where readings and discussions of current problems in physical education and sport are expected of the students. The focus will be on critically analyzing issues and trends in the field of physical education and sport, with an emphasis on understanding the impact of the field to education and society. Implications for the future are also explored. Students will get an opportunity to undertake a mini-action research on a related topic in PE and sport and share their findings with the class. A mix of face-to-face interactions, online learning and reflections, and group work is used in this module. It is intended that students be guided to holistically integrate the knowledge presented throughout the module.	Mon, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MES916	Strategic Management for Sport	4	This course aims to provide students with an insight into strategic management and planning, the concepts, the frameworks and the techniques. It is essential for students to understand strategy because in the contemporary competitive sport environment, direction and funding are directly related to a strategic plan. This course will also enable students to be more capable of mastering other courses most notably sport facility management and sport event management where they will be projected to be involved in the application of strategic components (e.g., long-term event planning, legacy leveraging including facility sustainability, and event portfolio management). The assessment will focus on real life strategic plans giving authenticity and application to sports organisations. Students will benefit from delivering a group/pair presentation to develop key skills for future, combined with an internal and external audit of the chosen sport organisation (i.e., an individual essay using the same strategic document underpinning the group/pair presentation).	Thu, 1800 - 2100	Letter Grade
NIE	MGE900	Communication in the Digital Age	2	This course demonstrates and explains new approaches to language use and communication in the digital age. The central idea is to experience directly what it is like to compose and share with others a text that combines a range of ways of representing knowledge (e.g., images, sounds, gestures, movie clips) for different purposes (e.g., storytelling, comparison, documentary, entertainment or education). During the course, there will be frequent opportunities to discuss current ideas and practices in contemporary communication, consider various real-world examples (e.g., Whatsapp, Instagram, YouTube and Facebook), learn with and from others and see the things and events around us in new and exciting ways. This is a blended learning course delivered through face-to-face and online sessions (e.g., Zoom)	Tue, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MHA902	Identification of Potential and Administration of Interventions for High Ability Learners	4	This course presents guiding principles for the identification and administration of programmes designed for High Ability Learners and Talent Development. Identification methods, criteria and procedures, tests used to identify the gifted and assessment issues will be discussed in view of programming provisions and intervention possibilities. Alternative identification tools and forms of intervention will be introduced with regard to culturally deprived gifted population and invisible underachievers. Standards for systematically developing, implementing and managing appropriate programmes to meet the needs of High Ability Learners at primary and secondary school levels will be examined. Issues relating to the integration of such programmes into general education programming; professional development and resources to support such programmes will be discussed.	Wed, 1800 - 2100	Letter Grade
NIE	MHA905	Issues, Policies and Trends in High Ability Studies	4	Contemporary issues with regard to formal programming for the gifted; equity issues and the needs of gifted children, including the gifted from disadvantaged home background will be explored. Significant longitudinal studies, current research and future possibilities in the study of highly intellectual and creative students will be examined in view of application of research to practice. Policies on programming that includes Individual Education Plans, acceleration for the extremely precocious in the form of grade-skipping, curriculum compacting, early admission to college will be analyzed. The rights and responsibilities of gifted children and adults in the context of local and global communities will be discussed as well.	Mon, 1800 - 2100	Letter Grade
NIE	MID915	Training Needs Assessment and Solutions	4	TNA is a basic process in instructional design that determines the needs of organisations prior to the development of training. It is one of the fundamental instructional design skills that students need to master.	Thu, 1800 - 2100	Letter Grade
NIE	MID922	e-Learning Tools for Training	4	In the new information age, many traditional classroom courses or training programmes need to be re-developed and conducted online to meet the needs of adult learners who often have to balance their work demands with their work demands with their social lives. In this course, the participants will learn how to use web-based tools, e-learning authoring tools and produce videos so that they can easily develop and conduct e-learning sessions for teaching and training in practice.	Wed, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MLS923	Separation and Analytical Chemistry	4	The discovery of new functional compounds often starts from the key step in the separation, purification, and qualitative/quantitative detection of the active component(s). The main goals of this course is to familiarise students with (i) state-of-the-art separation methodologies, (ii) development and applications of (bio)sensing/analytical instrumentations. The course topics include concept and trends in modern chemical analysis; various chromatographic and spectrometric methods; case study on separation of biomolecules and environmental samples; and fundamentals of (bio)sensing transducing techniques for the development of biosensors.	Tue, 0930 - 1230	Letter Grade
NIE	MLS926	Bioactive Natural Products and their Derivatives	4	The purpose of the course on Bioactive Natural Products and their Derivatives is to provide participants with fundamental knowledge of natural product chemistry and the role natural products play in drug discovery and development. Topics such as the distribution and biosynthesis of natural products and their ecological function within biological systems, as well as knowledge of drugs, drug extracts and bioactive natural products from plants and microbes that are used for production of medicine and herbal remedies, will be covered. In addition, innovative analytical techniques used in natural products research will be emphasized.	Mon, 0930 - 1230	Letter Grade
NIE	MLS942	Global Energy Systems	4	This is an introductory course that is designed for students to understand the global energy sources available for mankind. It provides both theoretical and practical understanding of how energy and climate policies are distribute and connected across a multitude of cases drawn from global to local arenas. This is the first course in this Master programme and is intended for those engaged with or planning a career in professional contexts relating to energy management, education, RD and marketing.	Tue, 1430 - 1730	Letter Grade
NIE	MLS943	Photovoltaic Physics and Solar Cells	4	Today the traditional energy sources based on fossil fuels are depleting at an ever fast rate and will be exhausted in the next centuries. Photovoltaic solar energy becomes one of the most feasible alternative energy sources that will provides energy demand for mankind in the future. This course deals with the issues of an alternative sustainable energy source that relies on the direct conversion of sunlight into electrical energy in solar cells based on the photovoltaic effect.	Thu, 1430 - 1730	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MLS950	Applied Quantum Mechanics	4	Quantum mechanics is widely recognized as the basic law that governs all of nature, including all materials and devices. It has always been essential to the understanding of material properties, and as devices become smaller it is also essential for studying their behavior. This is an introductory course on quantum theory designed for students to understand the rudiments of the physics governing the atoms and molecules. There is an increasing need for professionals in clean energy to delve deeper and deeper into the laws of microscopic regime.	Wed, 1430 - 1730	Letter Grade
NIE	MLS963	Conservation and Management	4	In a rapidly changing world where the utilisation of resources is inextricably linked to development, the challenge of ensuring the sustainable use of natural resources has global consequences. This course will deal with issues relating to the sustainable use, protection, conservation and management of the earths natural resources through relevant case studies. Local, regional and international initiatives, which address the issue of sustainable development and natural resource management, and the role of science in environmental management will be studied.	Wed, 1000 - 1300	Letter Grade
NIE	MLS972	Advances in Ecology	4	Besides introducing the various concepts in ecology, the course focuses on the complexity and interplay of ecology at the different levels of biological organisation (e.g., individual <-> populations <-> communities). In todays highly altered environments, knowledge about ecology has immense value in real-world applications to ensure a sustainable Earth for future generations. Singaporean issues are central, but are set in a global context. For example, the construction of the EcoLink@BKE in Singapore is an attempt to address habitat fragmentation, an issue also faced by many developing countries due to deforestation and habitat degradation. Topics include population growth models, competition, niche partitioning, trophic interactions, succession, and island biogeography.	Tue, 1400 - 1700	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MLS973	Physiological and Molecular Responses of Plants and Animals to Environmental Stress I	4	Environmental stress can be caused by both abiotic (physical and chemical) and biotic (effects of other organisms) factors. How plants and animals sense and respond to environmental stress have fascinated scientists. Due to both anthropogenic-driven and nature-driven environmental changes like changing solar radiation (both visible and UV radiation), global warming or increasing temperatures, increasing periods of freezing temperatures and droughts, ocean acidification, and increasing pollutants, determining the ability of plants and animals to sense and respond to different environmental stress becomes increasingly important. Participants in this course will learn about the molecular and physiological mechanisms used by both plants and animals to cope with environmental stress in the different environments.	Wed, 1400 - 1700	Letter Grade
NIE	MLT901	Foundations of the Learning Sciences	4	This course considers present day discourses on learning/learning sciences in the broader context of education and how people learn. Students will deepen their understanding of constructivist learning approaches and learn to be cognizant of the vital roles of language and inquiry in human learning. Specific learning sciences topics include: * Conceptual change * Knowledge building * Cognitive apprenticeship * Learning in activity * Computer-supported collaborative learning * Learning in virtual worlds * Teacher education from the perspective of learning sciences * Design-based research	Fri, 1800 - 2100	Letter Grade
NIE	MLT902	Orchestrating and scaffolding knowledge building with learning analytics, artificial intelligence and collaborative technologies	4	This course is relevant to school teachers or professional educators working in organizations. Knowledge building (KB) is a future-oriented pedagogy that aims to develop learners knowledge building capacity through collaborative idea improvement in schools or organizations. It is especially critical for the development of knowledge creation societies. An important supportive socio-cognitive and technological environment is critical. Technologies such as computer-supported collaborative learning (CSCL) have been used to support knowledge building. Emerging technologies such as learning analytics and artificial intelligence are also gaining traction. In this course, you will participate as a member of a knowledge building community to explore and debate various issues related to fostering knowledge building in schools or your organizations. You will learn to craft inquiry-based learning activities, design thinking prompts to support intentional learning, facilitate social negotiation of ideas among learners and design both the face-to-face and online environments to help learners deepen their learning. You will also learn to leverage learning analytics and artificial intelligence to support learners in knowledge building.	Tue, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MLT908	Design of Interactive Learning Environments	4	Topics include: * ILEs and Key findings from the Learning Sciences * Critical Perspectives on Educational Technologies * Design of Learning Environments Orchestration * Design of Scaffolding for Learning * Design of Learning Experiences with New Media * Design of Learning with Collaborative Technologies * Design of Learning with Mobility * Educational Games * Design of Learning Spaces * Assessment of Collaborative Learning * Scaling educational innovations	Thu, 1800 - 2100	Letter Grade
NIE	MLT915	Digital Game-Based Learning	4	The course will deal with digital games and theories of play that can support digital game-based learning. Students will be exposed to different approaches to the use of digital games to support teaching and learning together with their underlying theoretical bases. They will also learn through a substantial game-based learning group project. The specific topics include: Digital games for education Theories of play for conceptualising digital games Theories of learning for conceptualising game-based learning Game-Based learning and Gamification Design for learning with digital games Students are required to spend at least 3 hours in course readings and class preparation each week.	Mon, 1800 - 2100	Letter Grade
NIE	MME901	Theoretical Perspectives and Issues in Mathematics Education Research	4	This is a required specialisation course for the MEd (Mathematics) programme. It equips participants with foundational knowledge in mathematics education as preparation for specialisation elective courses in the programme. This course contributes to one of the programme objectives of providing the participants with a range of the big ideas in mathematics education theories and related research. This serves as an introductory course to induct participants into an inquiry disposition suitable to the disciplinary emphasis in mathematics education.	Mon, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MME903	Using Technology in Mathematics Education	4	This is a specialisation elective course for the MEd (Mathematics) programme. The course contributes to the following programme objectives particularly in the area of using technology in mathematics education: (1) provide participants with the knowledge and skills related to specific ideas in mathematics education; (2) develop the participants ability to relate the theoretical ideas in mathematics education to the authentic problems of practice faced by teachers in the classroom.	Wed, 1800 - 2100	Letter Grade
NIE	MME917	Problem Solving and the Teaching of Problem Solving	4	This is a specialisation elective course for the MEd (Mathematics) programme. This course contributes to the following programme objectives particularly in the area of mathematical problem solving and its teaching: (1) provide participants with the knowledge and skills related to specific ideas in mathematics education; (2) develop the participants ability to relate the theoretical ideas in mathematics education to the authentic problems of practice faced by teachers in the classroom. In addition, the course also serves to develop the participants critical, reflective, and creative thinking when solving mathematics problems.	Tue, 1800 - 2100	Letter Grade
NIE	MME922	Numbers and the Teaching of Numbers	4	This is a specialisation elective course for the MEd (Mathematics) programme. This course contributes to the following programme objectives particularly in the area of numbers and its teaching: (1) build the participants knowledge of the mathematics subject matter; (2) develop the participants ability to relate the theoretical ideas in mathematics education to the authentic problems of practice faced by teachers in the classroom. In addition, the course also covers students misconceptions in the learning of numbers in support of another programme objective of providing participants with knowledge related to specific ideas in mathematics education.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MML907	Language, Literacy and Culture	4	Teachers of language and literacy must not only have a good understanding of the content they teach but also of the social and cultural issues that impact teaching and learning. This course introduces participants to the ways in which language, literacy, ethnicity, gender and other social and cultural constructs affect communication and interaction in the home and school settings. Through a variety of readings drawn from a range of sources, participants are introduced to various themes, including the ways in which social structuring, cultural practices, and language use bear upon identity formation, participation and achievement in education, and functioning in other contexts.	Mon, 1830 - 2130	Letter Grade
NIE	MSC905	Science Discourse: Learning through Talk and Texts in the Classroom	4	This course aims to deepen participants understanding of the complex interplays between language, identity, and learning in general as well as gain knowledge about scientific reasoning, explanation, and argumentation for science teaching. Through theoretical exploration of key readings in the field and practical application with local data, participants will develop the basic skills to analyze classroom talk and text and relate these to issues of learning and identity. Moreover, participants will enhance knowledge-building of reasoning, explanation, and argumentation for the science classroom.	Wed, 1730 - 2030	Letter Grade
NIE	MSC911	AI and Emerging Technologies in Science Education	4	This course aims to provide you with an in-depth understanding of how artificial intelligence (AI) and emerging technologies are transforming science education. You will explore the latest trends, tools, and techniques that can be applied to enhance teaching and learning in science. By the end of the course, you'll be equipped with the knowledge and skills to integrate AI-driven solutions and technological innovations into educational practices, improving both classroom experiences and student outcomes. This course is designed for educators, curriculum designers, and anyone passionate about advancing the role of technology in education. Taking this course will provide you with the tools to stay at the forefront of educational technology. You will also gain valuable insights that can inspire new ideas for your own classroom or research endeavours, ensuring you remain forward-thinking in an ever-evolving landscape.	Tue, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MSE902	Human Development	4	This course examines the major dimensions of typical and atypical physical, cognitive, moral, emotional and social developments in relation to the patterns of growth, stability and change, which occur across the lifespan. The impact of biological, psychological, and social challenges on human development will be explored. An ecological perspective will be utilized to understand the individual, family, community, and society issues related to these challenges. A range of developmental learning theories will be introduced to help explain different outcomes in terms of learning, personality, behaviour, mental capacities and processes, and the influences of culture and language. Alongside the general theories of human development, disability will be introduced through a life course approach to offer an alternative framework for thinking about disability as it affects people of all generations and at all points of life course transition. This perspective is important, because it highlights how disabling societies and practices affect the population under consideration i.e. children, young people and adults, helping us to understand life course transitions in a collective way, and how this shapes our understanding of disability in the social world. Participants will be encouraged to link theoretical perspectives and empirical studies with their roles as educators in order to help them develop the necessary understanding and skills to assist others in navigating lifes present and future challenges.	Tue, 1800 - 2100	Letter Grade
NIE	MSE913	Curriculum Design and Development	4	This course introduces curriculum design and development models and practices pertinent to the field of special education. Students will demonstrate the why, what and how of curriculum design and development. Effective teaching and learning requires a renewed focus on the unique needs of individual learners and an understanding of differentiated curricula and pedagogies to meet the needs of these learners. This course aims to offer the knowledge and skills to develop appropriate curricula and instructional approaches to accommodate learners with diverse needs ranging from those with high support needs to those who are gifted and talented.	Mon, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MSE914	Evidence-based Practices in Special Education	4	This course provides an in-depth view of evidence-based practices in the field of special education. Participants will review the evidence-based practices across various domains (e.g., academic, behavioural, social emotional) in special education. Participants will also be introduced to the single-case research designs that are commonly used to evaluate the effectiveness of interventions with individuals with disabilities. Participants will be equipped to understand journal articles that examined intervention effectiveness in special education, and learn to translate this knowledge to impact their support of individuals with disabilities.	Tue, 1800 - 2100	Letter Grade
NIE	MSE915	Assessment of Children and Youth with Special Needs	4	The increased identification of children with special needs entails a more nuanced approach towards educational programming. The diverse profile that students with special needs requires a detailed assessment of their individual strengths and needs. This course offers an introduction to assessment and testing of children with special needs. It combines the introduction of the theories and concepts in assessment, with evidence-based practices when assessing children. Participants in this course will have direct experiences with screening, standardized, criterion-referenced, and behavioral assessment. Through these experiences, they will link the theories and concepts in measurement and child development with the practical guidelines, procedures, and applications.	Wed, 1800 - 2100	Letter Grade
NIE	MSM904	Analysis	4	This course in real analysis aims to introduce you to the order-theoretic, algebraic and geometrical structures of the real line, and the relationships between them. In particular, you will be introduced to the concepts of sequences and convergence first, for real number sequences, and next, for sequences of real-valued functions. This course is intended for educators, especially secondary and post-secondary school teachers, to help them gain an in-depth understanding of some topics in school mathematics such as limits of sequences, continuous functions such as polynomials, exponential function, trigonometric functions, the link between differential and integral calculi, through the lens of real analysis. This course will provide the foundation for students who read analysis at the postgraduate level.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MSM905	Data Science	4	This course is designed to introduce you the basics of data science methodology and let you be able to apply such methodology to real problems. This course is intended for educators, to empower them to perform data visualization, data preparation and prediction tasks. This course will also lay a foundation for students who plan to pursue a PhD in areas related to data science/statistics.	Fri, 1800 - 2100	Letter Grade
NIE	MSM907	Geometry	4	Geometry is one of the foundational topics in mathematics. This course presents a complete axiomatic system for Euclidean geometry and related geometry topics. By completing this course, you will gain a clear picture of the whole hierarchical structure of geometry. You will learn the rigorous definitions of the fundamental geometry concepts, such as angles, triangles, rays, congruent/similar triangles. You will also learn the formal proofs of the fundamental results in geometry, such as the equivalence of various different triangle congruency (similarity) tests, Angle Sum Theorem and Exterior Angle Theorem as well as the Midpoint theorem. The course will also cover some advanced topics in geometry such as the non-Euclidean geometries, projective geometry or differential geometry. These advanced topics will widen and deepen students' knowledge in geometry and help those who want to pursue higher degree study.	Tue, 1800 - 2100	Letter Grade
NIE	MTCL901	Language Code: Theory and Practice	4	As Chinese characters are ideographic in nature, the phonetic functions are weak. Furthermore, the structure of Chinese characters are complex and difficult to recognize, to read as well as to write. Therefore, phonetic system, Hanyu Pinyin was developed to aid in learning Chinese. Chinese characters and Chinese phonics operates with two different set of rules. Chinese characters represent single syllables while Hanyu Pinyin operates with a set of standard basic rules in relation to different forms of Chinese words. As instructors of TCIL, it is important to understand the characteristics of these two codes in order to effectively teach Chinese as an international language.	Tue, 1800 - 2100	Letter Grade
NIE	MTCL902	Vocabulary and Grammar: Theory and Practice	4	The fundamental purpose of learning any language is for communication purpose. Be it in spoken or written communication, vocabulary and grammar are two of the most important components in any language learning, as they play a vital role in building up language proficiency. In teaching Chinese as an international language, instructors must understand the grammatical rules and its effect on vocabulary on the target language to bring about effective teaching. Hence, this course will lay a good foundation in Chinese vocabulary and grammar basics, so as to effectively teach Chinese as an international language.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MTCL903	Chinese-English Contrastive Analysis & Its Application	4	The use of translation in learning a foreign language is widely used as a teaching and learning strategy to help students remember, comprehend and acquire the use of the target language. The influence of the learners first language, however, will have substantial impact in the language acquisition process. Hence understanding the major difference between Chinese-English through contrastive analysis in theories and practice of translation and its application in TCIL is necessary to equip TCIL instructor with the fundamental understanding to implement the bilingual model in TCIL.	Thu, 1330 - 1630	Letter Grade
NIE	MTCL904	Teaching of Listening & Speaking Skills in TCIL	4	Listening and speaking are two important skills required in any language learning. They are complex skills that need to be developed consciously. In any interaction, comprehending the language used is necessary for effective communication. Hence, as instructors for TCIL, it is important to acquire the various communicative language teaching pedagogical approaches in order to teach effective communication skills. Besides acquiring pedagogical approaches in teaching non-native learners, keeping abreast with recent developments and research on the teaching of Chinese language listening and speaking content and skills are also essential to build the competencies to effectively TCIL to the 21st century learners.	Mon, 1800 - 2100	Letter Grade
NIE	MTCL905	Teaching of Reading And Writing Skills In TCIL	4	Reading and writing are two important literacy skills one requires to function effectively in everyday life. These two skills are interconnected and can be developed together. With global economies and emerging new technologies, new literacies are already becoming part of the educational landscape. Hence, as instructors for TCIL, it is important to understand the various teaching pedagogical approaches to engage learners of this new age. Besides acquiring pedagogical approaches in teaching non-native learners, keeping abreast with recent developments and research on the teaching of Chinese language reading and writing content and skills are also essential to build the competencies to effectively TCIL to the 21st century learners.	Tue, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MTCL906	Application of Information Technology in TCIL	4	In today's 21st century education, the use of ICT for teaching and learning has infiltrated schools at a rapid pace. To ensure that today's digital learners are future-ready for the workforce of tomorrow, educators must understand and embrace the need to employ the use of ICT to create a 21st century learning environment. A 21st century educator must be competent to use technology with ease in teaching and learning, be it in the classroom or out of classroom where learning takes place anytime, anywhere. Hence, as TCIL instructors, it is important to understand the application of technological tools with content and pedagogical approaches, and appreciate how ICT can create an effective learning environment for TCIL.	Thu, 1800 - 2100	Letter Grade
NIE	MTCL907	Language Testing & Assessment in TCIL	4	Testing and assessment is an integral part of the learning process, and must be closely aligned with curricular objectives, content and pedagogy. It serves as the central function of getting the best possible evidence on what the students have learned. Teachers and students can then use this information to decide what to do next in the teaching and learning process. It is important that TCIL instructors be equipped with the necessary assessment competencies, so that quality teaching and learning can be achieved in all TCIL classrooms, bearing in mind the varied language backgrounds and proficiency levels of TCIL learners.	Thu, 0930 - 1230	Letter Grade
NIE	MTCL908	Analysis & Development of Instructional Materials for TCIL	4	Over the last three decades, there are many TCIL curriculums and instructional materials developed for non-native learners globally. However, TCIL instructors find it challenging to identify proper instructional materials for learners of differing abilities. This course aims to enhance the knowledge and skills of TCIL instructors in analysing the instructional materials developed by different editors and publishers. In addition, through better understanding of principles of the curriculum design and instructional materials development for TCIL, instructors will be well equipped in developing instructional materials for different learners.	Wed, 1800 - 2100	Letter Grade
NIE	MTCL909	Global Chinese and Contemporary China	4	The rapid rise of China as a global economy has driven an increase to the educational and pragmatic value of learning Chinese language globally. Understanding the history and development of China's rise and economic globalization is essential to TCIL instructors as they tread beyond the grounds of China in TCIL to non-native learners.	Tue, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MTCL911	Professional English for TCIL Instructors	4	All teachers need to possess skills that enable them to communicate effectively with a range of stakeholders in the educational settings. Being able to apply these skills in a second language is all the more critical for Chinese language teachers who will need to fulfill school related tasks and communicate with other members of staff, students and their parents in the English medium. This course helps to prepare participants who will be working in international settings as they move through their careers.	Wed, 1800 - 2100	Letter Grade
NIE	MTCL912	Early Childhood Education in TCIL: Theory and Practice	4	Early childhood education is crucial as it has direct impact on the development of learning skills, social and emotional abilities of a child. It is during the early childhood years that we should accentuate the development of language, speech and literacy, as it will significantly enhance the child's learning in the later years. Educators should leverage on the varied learning styles and characteristics of early childhood learners, from infancy to the age of eight, apply corresponding learning theories into practice, to bring about effective teaching and learning of Chinese as an international language.	Mon, 1800 - 2100	Letter Grade
NIE	MTCL913	Chinese Language Education for International Schools	4	According to the study by International School Consultancy Research (2017), there is a rapid surge in the growth of international schools globally. With a growth in expatriate families and an increase in enrolment within the schools host country, the increasing trend is expected to continue in the next ten years. This growing demand corresponds to the need to develop professionally-trained Chinese language educators for International schools. Language offerings in international schools are unique and vary over different school programmes. However, each aims to provide students with an edge in this competitive and ever-changing world. Hence, this course will broaden participants' knowledge of teaching Chinese language in international school settings and provides constructive career development opportunities to participants.	Mon, 1800 - 2100	Letter Grade
NIE	MTD907	Training Needs Assessment and Solutions	4	Training needs analysis (TNA) is a basic process in instructional design that determines the needs of organizations prior to the development of training. It is one of the fundamental instructional design skills that students need to master. Given a performance problem, students should be able to conceptualize a training needs assessment by appropriately applying goal analysis, performance analysis, learner analysis, needs and wants analysis, task analysis, contextual analysis, and feasibility analysis.	Thu, 1800 - 2100	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MTD909	E-learning tools for Training	4	In the new information age, many traditional classroom courses or training programs need to be re-developed and conducted online to meet the needs of adult learners who often have to balance their work demands with their social lives. In this course, the participants will learn how to use web-based tools, e-learning authoring tools and produce videos so that they can easily develop and conduct e-learning sessions for teaching and training in practice. Through readings, online learning, discussions, and hands-on activities, participants will be able to: * Compare the pros and cons of various web-based tools for training * Compare the pros and cons of various e-learning authoring tools; * Design and develop e-learning lessons by using appropriate tools. * Identify key features of a learning management system and to use a web-based LMS * Apply techniques in digital video production from pre-production, production to post-production to produce an interview video and a training video	Wed, 1800 - 2100	Letter Grade
NIE	MTD913	Teaching and Learning in Higher Education	4	The Teaching and Learning in Higher Education (TLHE) course aims to provide a structured environment for early career faculty, within which they can develop their practical skills and understanding of teaching in higher education. This course begins by exploring learning theories, course design, evidence-based teaching approaches, assessment, and communication with students within the context of their own teaching. Then, learners are provided with opportunities to sharpen their understanding by putting theory into practice. Through this course, they will have opportunities to develop their confidence in the teaching practice through reflection and participation in a community of practice, and as a result, develop a critical mindset that will continue to challenge the way they teach. Content Topics: Teaching in specific higher education contexts, e.g. NTU, Poly, etc. Learning theories Teaching in your discipline Course design Constructive alignment Assessment Designing learning activities Planning a lesson Facilitating Learning Evaluating your teaching Increasing your impact in teaching Showcasing your teaching Blended learning	Fri, 1400 - 1700	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MTL903	Tamil Language in Education	4	This module aims to strengthen students knowledge on teaching Tamil as a second language in Singapore. The bilingual policy in Singapore will also be covered in the course. The module will elaborate on Language Acquisition, Language Learning theories. Strategies and approaches on teaching Tamil language and developing the four language skills of students effectively will also be elaborated in this module.	Fri, 1830 - 2130	Letter Grade
NIE	MTL904	Functional Tamil Syntax	4	This module aims to widen students knowledge on the theories of Functional Tamil syntax. The module will mainly focus on Tamil syntax and its various components. In- depth, students will study Tamil phonology and morphology. Students will analyse the formation and division of words, phrases and its structure, sentence structures and types of sentences, immediate constituent (IC), phonetics and phonemics in Tamil Language. The module will also cover the relationship between words, phrases and sentences using the insight gained. Ultimately, the knowledge gained should be applied in daily life and made relevance to authentic examples such as Short stories, conversational Tamil, radio conversations etc.	Mon, 1830 - 2130	Letter Grade
NIE	MUE902	Philosophy of Music Education	4	This course centres on the philosophical foundations of music education. In particular, it seeks to address the big questions that confront contemporary music education. Course readings range from ancient to living scholars and philosophers, and cut across cultural borders in its inclusion of Asian and comparative philosophical writings. (a) Philosophy of music education in the ancient world (b) Utilitarian philosophy of music education (c) Aesthetic philosophy of music education (d) Praxial philosophy of music education (e) Music education through postmodern lenses (f) Asian philosophies of music education and comparative approaches	Tue, 1730 - 2030	Letter Grade

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
NIE	MUE904	Studies in Musical Behaviours	4	This course involves a study of musical practices around the world with special emphasis on interdisciplinary perspectives such as philosophy, music education, analysis and sociology. An important corollary will be the ramifications for the teaching and learning of the various musical traditions. i) Deconstruction of Music/al and Behaviour ii) Music as human-constituted activity; aspects of disciplinarity iii) Music and discourses of behaviour iv) Means, methods, media/tion/Systemic and Systematic practices v) Cap/abilities in Music-making vi) Consequences involving music and behaviour vii) What does musical behaviour mean? viii) Musical practices - exemplars ix) Seminar Presentations	Thu, 1730 - 2030	Letter Grade
RSIS	SR6010 (Samir Puri)	The Revolution in Military Affairs & Force Transformation in the 21st Century	3	In this course, you will develop a critical understanding of how emerging technologies such as AI, robotics, cyber capabilities, and hypersonics are reshaping defence innovation, military competition, and the future of warfare. Designed for students interested in security studies, strategic planning, and technology policy, the course challenges you to think analytically about Revolutions in Military Affairs (RMA) and assess how major powers and small states adapt to technological change. By connecting theory with real-world defence challenges, you will gain valuable insights and practical skills for careers in defence policy, strategic analysis, and security-related fields.	Trimester 1 4 Aug 2026- 31 Oct 2026 Every Friday 2pm - 5pm	Graded
RSIS	SR6047 (William James)	Military Alliances & Security Cooperation	3	While this course has no formal pre-requisites, the lecturer assumes that students are interested in history and have a general understanding of the major events of the twentieth century (e.g., the aftermath of the First World War). If they are unfamiliar with such global events, some recommended readings, podcasts, and documentaries are provided at the end of this document.	Trimester 1 4 Aug 2026- 31 Oct 2026 Every Tuesday 2pm - 5pm	Graded
SBS	BS7002	Foundation Course in Information Biology	3 AU	https://www.ntu.edu.sg/sbs/admissions/programmes/graduate/graduate-programmes/detail/sbs-ph.d.-programme#curriculum	Not available yet	No formal Exam
SoH	HC7003	Special Topics in Chinese Overseas & Their Relations with China	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/chinese#Content_C002_Col02	Thursday, 10.30am-1.20pm	This course is conducted in Chinese.
SoH	HC7012	Research & Methodology	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/chinese#Content_C002_Col02	Tuesday, 9.30am-12.20pm	This course is conducted in Chinese.

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
SoH	HC7016	Chinese Cold War in Sinophone Literature, Film and Culture	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/chinese#Content_C002_Col02	TBC	- This course is conducted in Chinese. - Students enrolling in this course must be proficient in both Chinese and English. Advanced-level Chinese proficiency is essential, including the ability to speak, write, and comprehend Chinese fluently.
SoH	HH7101	Approaches to the past	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/history#Content_C006_Col02	Thursday, 10.30am-1.20pm	Nil
SoH	HL7108	Graduate Seminar in Victorian Literature & Culture	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/english-(creative-writing)#Content_C003_Col02	Tuesday, 10.30am-1.20pm	Requires background in literary studies.
SoH	HL7114	Graduate Seminar in Cultural Studies	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/english-(creative-writing)#Content_C003_Col02	Wednesday, 9.30am-12.20 pm	Requires background in literary, film, media, art history or other humanistic studies.
SoH	HR7003	Advanced Studies in Southeast Asian Art Histories	3	https://www.ntu.edu.sg/soh/admissions/graduate/graduate-course-descriptions/art-history#Content_C003_Col02	Wednesday, 9.30am-12.20pm	Requires background in Art History or related field.
SPMS	PH7003	Graduate Solid State Physics	4		Tuesday 10:30am – 12:20pm Wednesday 10:30am – 12:20pm	
SPMS	PH7007	Experimental Techniques in Condensed Matter Physics	4		Wednesday 8:30am – 10:20am Thursday 8:30am – 10:20am	
SPMS	PH7014	Optical Spectroscopic Techniques	4		Tuesday 1:30pm – 3:20pm Thursday 1:30pm – 3:20pm	
SPMS	PH7021	Quantum Information	4		Monday 1:30pm – 3:20pm Thursday 3:30pm – 5:20pm	
SPMS	PH7027	Plasma Physics and Fusion Energy	4		Wednesday 1:30pm – 3:20pm Friday 10:30am – 12:20pm	
SPMS	PH7028	Nanophotonics	4		Monday 10.30am – 12:20pm Wednesday 3:30pm – 5:20pm	

School	Course Code	Course Title	Course AU	Course Description (if not available on website)	Class Timetable	Others (e.g. Pass/Fail grading)
SPMS	MH7002	Discrete Methods	4		Tuesday 1:30pm – 3:20pm Wednesday 9:30am – 11:20am	
SPMS	MH7003	Algebraic Methods	4		Tuesday 3:30pm – 5:20pm Thursday 1:30pm – 3:20pm	
SPMS	MH7005	Algorithms and Theory of Computing	4		Tuesday 10:30am – 12:20pm Friday 10:30am – 12:20pm	
SPMS	MH7011	Topics in Scientific Computation II	4		Thursday: 10:30am – 12:20pm Friday: 3:30pm – 5:20pm	
SPMS	MH7013	Topics in Probability and Statistics II	4		Monday 1:30pm – 3:20pm Wednesday 1:30pm – 3:20pm	
SPMS	MH7018	Graduate Seminar - Pure Mathematics I	4		Monday 10:30am – 12:20pm	
SPMS	MH7022	Topics in Nonparametric Estimation	4		Wednesday 3:30pm – 5:20pm Thursday 3:30pm – 5:20pm	
SSS	HE7002	Econometrics I	3	https://www.ntu.edu.sg/sss/admissions/graduate-education/graduate-research/economics#Content_C094_Col00	Day/Time/Venue: To be confirmed	Student interested to take this module is to contact the Course Instructors via email for approval: gfheng@ntu.edu.sg and seokyoung.hong@ntu.edu.sg The Course Instructors are Assoc Prof Feng Qu and Asst Prof Seok Young Hong.
SSS	HE7101	Seminar in Microeconomics	3	https://www.ntu.edu.sg/sss/admissions/graduate-education/graduate-research/economics#Content_C094_Col00	Day: Thursday Time: 1.30pm to 4.30pm Venue: To be confirmed	Student interested to take this module is to contact the Course Instructor via email for approval: tathow.teh@ntu.edu.sg The Course Instructor is Asst Prof Teh Tat-How.