

SPECIAL TOPIC COURSES

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Important Note:

Please note that not all the courses in this catalogue are offered every semester. The Special Topic Courses offered will be updated every semester as advised by the respective Academic Groups.

SPECIAL TOPIC COURSES

Asia Languages & Cultures (Chinese)

Chinese Language

SA801 - Chinese Writing System (Chinese Paleography)

Research resources and methodology; micro- and macro-studies; origins of the Chinese writing script; formal and structural evolution of the Chinese writing script; relationships between form, structure and meaning; analyses of selected texts in oracle bone and bronze inscriptions.

SA802 - Chinese Syntax

Field of Chinese syntax; methodologies of Chinese syntactic analyses; formation and classes of words; phrase structures and types; sentence structures and types; relationships between word, phrase and sentence.

SA803 - Applied Linguistics

Teaching approaches and methods in language teaching; syllabus design and curriculum development; curriculum evaluation model; comparing and contrasting two languages, interlanguage and error analyses; sociocultural variables in language learning, teacher education in language teaching; research methods in applied linguistics.

SA807 - Special Topics in Chinese Lexicology

In-depth study of significant aspects of Chinese lexicology. Selected topics include core vocabulary; lexical semantics; receptive vs. productive aspects of vocabulary; lexical variation; wordlist and frequency counts; collocation; corpus and concordance; wordlist and frequency counts; and the craft of lexicography.

SA808 - Special Topics in Sociolinguistics

Detailed study of sociolinguistics with special reference to the sociolinguistic situation in Singapore. Selected topics include societal multilingualism; qualitative formulas; quantitative approaches; ethnicity and social networks; language attrition; varieties of language; and language planning and standardization.

SA809 - Special Topics in Chinese Rhetoric

Detailed study of selected topics in Chinese rhetorical studies, such as peculiar rhetorical devices, norm and deviance, rhetoric and culture, the language of literary works, revitalization of traditional rhetorical techniques, use of dialectal expressions and essential writings in the history of Chinese rhetoric.

SA819 – Graduate Seminar (Chinese Language & Culture)

It is designed to introduce participants to the theoretical foundation of educational research on Chinese language & culture. Every participant will be scheduled to present at least one research paper orally during this course. He/she has to discuss the scope of the presentation with his supervisor and submit an abstract of his/her presentation at least one week before the presentation. After the presentation, the lecturer will facilitate a discussion of the research topic amongst all participants. A copy of the paper is to be submitted to the lecturer within the next two weeks.

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Chinese Literature and Philosophy

SA804 - Chinese Literary Criticism

Literary theories and practices in the Chinese tradition of literary criticism, including literary theories, critical studies of writers and works from the perspective of traditional Chinese literary criticism, in-depth studies of selected works of literary criticism; critical analyses and reevaluation of traditional Chinese literary criticism in the light of modern western literary theories.

SA805 - Classical Chinese Poetry and Poetics

In-depth study of selected topics in traditional Chinese poetry (including ci) and poetics, including the study of authors and works, poetic theories, and prosody.

SA806 - Chinese History and Culture

Study of selected topics in Chinese history and culture, such as Chinese historiography, traditional government of China, shi and Chinese culture, women in traditional China, Song culture, and cultural changes in modern China.

SA810 - Special Topics in the History of Chinese Literature

Studies of one or two topics essential to an in-depth understanding of traditional Chinese literature: society, civil service examination, education system and literature; influence of Confucianism, Taoism or Buddhism on Chinese literature; major themes in Chinese literature; pre-Qin, Tang or Song literature, and their significance in the history of Chinese literature; major literary schools and movements.

SA811 - Studies in Chinese Classics

In-depth study of selected Chinese classics which have far and wide influence in Chinese culture, such as The Analects, Mencius, Daodejing, Zhuangzi, Hanfeizi, Shiji, Jinsi lu, Chuanxi lu, and The Platform Sutra.

SA812 - Special Topics in Chinese Philosophy and Religion

Study of selected topics in Chinese philosophy and religion, such as pre-Qin Confucianism and Taoism, Wei-Jin Neo-Taoism, Song-Ming Neo-Confucianism, religiosity in Confucianism, the Taoist theory of inner alchemy.

Important: All the above subjects are taught in Chinese only. Interested students will be required to read some classical Chinese writings on their own.

SPECIAL TOPIC COURSES

Asian Languages & Cultures (Malay)

SA813 – Research in Malay Language Studies

The aim of the module is to examine the theories and methodologies used in Malay Language studies. Candidates will be required to be engaged in critical analysis of current works pertaining to research in Malay phonology, morphology, syntax and semantics. Other relevant area of language studies such as comparative and contrastive studies including discourse analysis will also be dealt in depth.

SA814 – Theory and Practice in the Study of Malay / Indonesian Literature

This module examines the general literary theories, criticisms, approaches, methods and system of classification used in the writing of history and development of the Malay and Indonesian literature; main problems and issues related to it; new and latest research findings and view, and important and potential research topics and areas. The module aims to build a strong foundation and to explore new ground, in both theory and practice in the study of Malay and Indonesian literature.

SA815 – Issues in Malay Studies

This module examines the key and existing issues of Malay Studies through a critical review of existing works. Such a critical evaluation aims towards greater knowledge and understanding as well as the building up of research materials wherever possible and necessary. The module aims to identify new areas of research and to encourage the exploration of original and creative methods that could be developed from the current knowledge in Malay Studies.

SPECIAL TOPIC COURSES

Asian Languages & Cultures (Tamil)

SA816 – Special Topics in Sociolinguistics

The detailed analytical study of the sociolinguistics with special reference to the sociolinguistic situation in Tamil Nadu and Singapore. Special topics include Tamil as a native, first and second language; multilingual nature; varieties of language, language acquisition and learning; language planning, modernization and standardization.

SA820 – Graduate Seminar (Tamil Language and Culture)

This course is designed to introduce postgraduate students (by research) to the research methodology and to promote disciplined inquiry into their research topics. Through presentations and critical analysis, students will learn to develop new insights with regards to their research topic.

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Centre for Research in Pedagogy and Practice

SR819 - Vygotsky and Pedagogy

Set against the backdrop of the need to prepare students for life in the 21st Century through schooling, crucial issues remain concerning the nature of learning and its relationship to psychological development and pedagogy. This course seeks insights into these matters from the seminal work of the Soviet psychologist Lev Semyonovich Vygotsky (1896-1934). The course is organised into two main parts: (i) a close and communal reading of "Vygotsky's" book, *Mind in society: The development of higher psychological processes* (1986); and (ii) an exploration/critique of the Zone of Proximal Development (ZPD) and the notion of scaffolding in contemporary Singapore classrooms. The course also considers some recent data collected as part of CRPP's CORE 2 research programme into pedagogy and assessment in Singapore schools.

SR820 – Statistics Skills Lab: Applied Statistics for Psychological and Educational Research

Research methods courses currently available at NIE lay emphasis on providing student with predominantly theoretical-foundational knowledge of the concepts and big ideas pertaining to research methodologies (e.g., SE811, and SE812). For instance for SE811 it is stated that the course provides students with "...the foundation for the candidate's methodology chapter..." Similarly, SE812 covers theoretical aspects for quantitative research design and analysis, such as "...1. Purpose and roles of quantitative research; 2. The generation of research questions/hypotheses; 3. Experimental and non-experimental designs..." etc.

Although it is important to have a good understanding of the theoretical underpinnings of quantitative analyses and when to apply them, much of the expertise develops when a student has ample opportunities to apply these theoretical concepts to a variety of authentic educational and psychological data. With the current course offerings, however, there is typically little time and opportunities for students to engage in extensive hands-on sessions to gain essential skills and confidence in conducting a variety of analyses.

The proposed course addresses this potential shortcoming by providing students with statistical skills lab training, allowing them to gain essential practical skills in applied statistics for psychological and educational research.

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Curriculum, Teaching and Learning

SA1030 – Citizenship Education: Trends and Issues

This subject introduces participants to the major concepts, perspectives and models of citizenship education. Key issues such as the contested nature of citizenship education, the democratic ideal, impact of globalization, citizenship education in the school curriculum will be examined. The major cross-cultural and national studies in citizenship education will be critically analysed for their findings, methodologies and implications. Case studies of citizenship education in the different types of democracies, such as western democracies, „Asian“ democracies, and newly emerging democracies, will be discussed. Special attention will also be given to the development of citizenship education in Singapore. The role of the teacher as a citizenship educator will be addressed.

SA1031 – Sociology of Curriculum

This course will focus on curriculum issues that have a strong combination with contemporary sociological theories. These issues include, but not limited to, the dual notion of power which shapes curriculum knowledge and school subjects, equity problematic vs problematic of knowledge in the production of school curriculum, globalization and national imaginaries that bring in the topics of cultural hybridity, cultural anxiety, cultural dislocation and historical amnesia in curriculum decision-making, and cosmopolitanism which normalises the school subjects through demarcating the civilised and non-civilised in educational practices.

SA1032 – Trends and Issues in Contemporary Curriculum Discourses

This course explores main currents in curriculum theory. It involves a variety of curriculum discourses that form multifaceted curriculum understandings. Among others, we will draw attention to curriculum discourses that link political theory, feminism, aesthetics, racial and ethnic theories, institutionalism, phenomenology, and all posts. The reviewing of advanced conversations and debates over various problematics in curriculum would help open new possibilities in the invention of our own curriculum theory(ies).

SA1033 – History and Reform in Curriculum

This subject will re-examine the historical changes of curriculum to problematize and reconstruct the nature of curriculum reform. The historicizing of curriculum will allow us to rethink curriculum change as a non-linear and uneven transformation contingently formed by the complexity of power relations which draw from different historical trajectories. The amalgamation of multifarious discourses makes impossible the logical and causal history of curriculum that has been taken for granted before.

SA1034 – Inquiry into Curriculum and Teaching I

The course is designed to introduce students to ways of thinking and scholarship in curriculum studies and to promote disciplined inquiry into curricular and pedagogical issues and phenomena, both of which are vital for preparing students to conduct a practice-focused dissertation.

SA1035 – Inquiry into Curriculum and Teaching II

This course aims to help students understand the contexts (social, cultural and political), processes (planning, enactment and evaluation) and conditions (physical, material and psychological) that shape and mediate the curriculum, pedagogy and assessment practices. Student will use a set of lenses to conceptualise, analyse and interrogate teaching, learning and assessment issues and through their inquiry redesign and innovate practices.

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SA1036 – Review Methods for Contemporary Issues in Curriculum, Teaching and Learning

This course fills a current gap in the research training of higher degree students in Curriculum, Teaching and Learning Academic Group. As part of their research training, they are expected to develop a robust theoretical framework that underpins their research study, drawing from a critical review of existing theoretical and research literatures. The interrogation of the literature of their chosen study of research is conducted in the context of peer feedback and critique.

SA1037 Research Designs and Methods in Curriculum, Teaching and Learning

This course fills a gap in the research training of higher degree students in the Curriculum, Teaching, and Learning Academic Group. As part of their research training, students are expected to deepen their conceptual understanding of research designs and methods relevant to studies in curriculum, assessment, teaching, and learning. The application of the research designs and methods will be conducted in the context of students' chosen field of study.

SA1038 Fieldwork in Curriculum and Teaching

The course is particularly designed for PhD and year-2 EdD students in CTL who will embark on a dissertation using fieldwork methods. It focuses on assisting higher degrees students in curriculum and teaching in conducting, analyzing, and producing a piece of fieldwork in educational settings. Students are required to undertake supervised fieldwork which allows them to gain direct experience with various elements of fieldwork research, in conjunction with a careful study of the theory and methods of naturalistic/interpretive social science research.

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Early Childhood & Special Education

SA1000 – Experiential Inquiry

This subject provides the opportunity for students to select an area of interest (eg. inclusive preschool) or a particular group of individuals (eg. adults with autism in vocational settings), which will become the focus of an in-depth experiential inquiry. After identifying the focus for their experiential learning and contacting an appropriate site for attachment, students will engage in activities such as teaching and learning opportunities and working directly with relevant stakeholders to gain a deeper understanding of the quality of service provision. Students are expected to complete an assignment that consists of learning how the particular site(s) cater to its clientele, assessing the quality of services, and proposing a constructive action plan. This subject is particularly applicable for individuals from the PDCM route who may desire to have more direct experiences in SE or EC.

SA1001 – Researching with Young Children: Connecting Qualitative Methods with Contexts, Issues, and Dilemmas

This course will allow participants to become more aware of the dilemmas and issues involved in ethical qualitative research with young children (preschool & primary).

Participants will explore issues of power, subjectivity, and voice in researching with children and adult “gatekeepers” (e.g. research ethics, ways to enter the field, building relationships with participants, and representation of data).

These issues will be addressed through fieldwork including observations and interviews of children in natural settings, the creation of field notes and transcripts, collection of artifacts; and the analysis of data.

SA1002 – Assessment of Children and Youth

This course offers an introduction to assessment and testing in early intervention, special needs, and gifted education. Topics to be covered include: foundational concepts in assessment, technical aspects, purposes, assessment processes, approaches, testing procedures, ethical issues, and collaboration with other professionals.

SA1003 – Learning with Assistive ICT for Diverse Learners

Recent advancement in ICT and learning theories calls for a tighter consideration of the coupling relationship between technology and learner. This course, grounded in contemporary foundations of learning, challenging traditional views of schooling, introduces how students with diverse abilities learn with assistive ICT. Opportunities exist within the course for students to focus their interest and learning on a particular subject or topic, particularly through the research element of the course.

SA1004 – Childhood Studies in a Global Context: The multiple Perspectives and Methodologies

The course will reconceptualize childhood through reviewing the various scholarly work constructing the perspective and phenomenon of childhood around the world. The goal of the course is to offer a space for doctoral and master of students to gain deeper insights when studying a child (or a group of children) – by drawing upon a wide range of view; - with attentions to the situated context. It is believed that childhood as a result of socio-cultural construction, which concerns society, culture, economy, family and schooling.

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SA1005 – Research in theories and Practices of Special Education

Recent advancement in special and inclusive education calls for a revolutionary consideration of the coupling relationship between special and inclusive education. This course, challenging traditional views of research and practices, introduces how the philosophers of difference in practice lead to action of rethinking inclusive education

SA1006 – Advanced Topics in Autism Spectrum Disorders

Although the syndrome of autism spectrum disorders (ASD) was identified over six decades ago, it was only in the recent decade that this condition received increased public attention. However, this increased awareness has led to a corresponding increase in the number of students with ASD both in mainstream as well as special number of schools. There has been a corresponding increase in the number of graduate students who are interested in pursuing ASD as topic for research in the fields of early childhood education. Whilst there are courses at the level of professional development, there are no courses pitched at postgraduate level providing research students with an in-depth foundation of the plethora of research conducted in the past decades. There is hence a need to provide graduate students with a course that will provide the foundational grounding in this topic whilst at the same time allowing the flexibility to read more deeply in the specific area of interest

SA1007 – Social Emotional Learning for Diverse Learners in the Classroom

Recent research has consistently shown how one's social and emotional functioning impact on one's learning and academic achievement (Elias & Arnold, 2006; Ee, 2009; Zins, Weissberg, Wang, & Walberg, 2004). Recent MOE speeches also call for the important then for educators to be equipped to deal with not just the cognitive needs of their learners, but also have greater soft skills to meet their socioaffective needs and concerns educators of the 21st century would need to be equipped not just with the cognitive tools to teach their academic subjects but also to connect with and understand their diverse learners and build on academic success through soft-skills training of students and addressing their social and emotional learning and advancing their intelligence in the socioaffective domain.

SA1008 - Diversity in the Early Childhood (EC) Classroom

Singapore is a multicultural society where people of different cultures (such as ethnicity, language, religion, gender, physical abilities, age and income) live, study and work together. Hence, there is a need for us to be aware of and deal with these differences in order for us to coexist in peace and harmony.

Research shows that the best time to introduce the concepts of diversity and social justice is in the early years. However, teachers of young children must first be aware and acquire the necessary knowledge, skills, attitude, experience and dispositions before they can develop a personal pedagogy which promotes diversity and social justice to work with young children in EC classrooms. They must then work towards promoting children's voices to be heard in research, practice and policy in the field of early childhood care and education.

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English Language and Literature

SA821 – Current Research In Linguistic Pragmatics

This subject will provide an overview of core theories in pragmatics as well as a review of the latest research in pragmatics. Among the topics covered are the nature of reference, information structure, Speech Act Theory, Gricean pragmatics, Conversation Analysis, and common ground.

SA822 – Lexical Approaches To Language Description and Vocabulary Learning

The course will explore lexical approaches to language description such as pattern grammars and collocational patterns, Sinclair's idiom *principle* and Hoey's concept of *lexical priming*. The impact of such lexically-oriented frameworks for language description on lexicography and language teaching will then be examined through reviews of innovations in dictionary production, syllabus design and vocabulary learning tasks.

SA823 – Academic Discourse

The course introduces participants to the conventions of academic discourse in preparation for the writing of their postgraduate thesis/ dissertation. Course participants will analyse texts from their own discipline to observe the discourse practices in their discourse community and learn cognitive and metacognitive strategies for producing these types of writing.

SA824 – Written Discourse Analysis

The course will examine a variety of theoretical and analytical models, approaches and concepts concerned with text. It will include consideration of the similarities and differences among different types of discourse and ways in which knowledge about text and text analysis is relevant and applicable to pedagogical contexts.

SA826 – Advanced Phonetics and Phonology

This course focuses primarily on the history as well as current developments in the field of phonetics and phonology. It aims to provide a very broad and thorough theoretical background for students who may be interested in attempting a post-graduate research topic in this field. A basic methodology for doing experimental work in phonetics and/or phonology will also be introduced.

SA827 – Advanced Sociolinguistics

The field of sociolinguistics in the 21st century is a mature, confident and vibrant discipline. At its core is a concern for observable facts of language variation and principled thinking about the reasons and consequences of this variation and change. The course will:

- 1) Set out methods of observation and investigation in sociolinguistics and give a toolkit of field methods available to the sociolinguists.
- 2) Analyze in depth aspects of the social correlates of language – class, gender, age, ethnicity and speech communities.
- 3) Examine Macro-sociolinguistics matters and the socio-political matters of language change

This course provides a useful resource for more advanced sociolinguists and is a necessity for any

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students interested in pursuing a post-graduate research degree in the field.

SA828 – Language and Globalization

This course explores the impact of globalization on the current spread of English around the world from a sociolinguistic perspective. Students will analyze the historical, social, cultural, economic and political factors that influence the global spread of English in arriving at an understanding of the way certain global structures and practices impinge on sociolinguistics relations and examine their implications for language, culture and identity in a post-modern world. They will critically consider issues such as the global-local interface, ethnocentric and culture, and world Englishes and English as a Lingua Franca in light of the recent debates and controversies arising from these topics.

SA829 – Statistical Analyses for Language Assessment

This seminar will cover such topics as basic descriptive statistics for norm-referenced and criterion-referenced tests, inferential statistics, exploratory and confirmatory factor analysis and structural equation modeling for language assessment investigators.

Additional topics to be discussed would be quantitative research studies related to validation, reliability, and fairness of language assessment. SPSS software will be used for this course.

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Humanities & Social Studies Education (Geography)

SA848 - Transnationalization of Capital, Networks and Contested Economic Space

This course discusses the changing economic space arising from capital flows. It examines the strengths and weaknesses of local firms in responding to the process of transnationalization of capital and the options that are open to them in contesting for an economic space in an increasingly competitive global economy. The complexities of corporate networks, cultural links, institutional frameworks and others will also be discussed. The experiences of firms in developing countries will be used as examples.

SA849 - Quantitative and Computing Methods in Geography

This course introduces students to a range of quantitative and computing methods and techniques most frequently used for geographical research and problem-solving. A sequence of lectures, practical exercises and course projects will guide students through a range of techniques covering

- (1) Statistical techniques for geographical data analysis;
- (2) Simulation modelling for geographical systems analysis;
- (3) Spatial allocation models; and
- (4) Multi-criteria analysis and linear programming for land use optimisation. Students will gain hands-on experience in using an advanced statistical software package for statistical analysis, a microcomputer-based spreadsheet for simulation modelling, and integration of GIS with multi-criteria analysis for land use allocation.

SA852 - Capitalism, Development and Urban Change

Focus is on the relationships between modern capitalist development and the associated spatial evolution involving urban change. The module explores theories and ideologies of development in the context of industrial capitalism of the colonial powers and post-colonial capitalism as applied in post-war independent nations. The dynamics of modernization and urbanization taking place in post-war independent Asian nations are examined in general. Case studies of Asian cities which have grown from small colonial settlements to present-day metropolitan centres will be selected for further illustration and analysis with reference to their specific features

SA853 – Transnationalizing Services – Linkages and Networks

The course will look into salient features of the major types of services that have contributed to national economic growth and development. The growth and expansion of key services, namely finance, transport, power and water supplies are discussed to showcase their impact on local and international economies. Specifically, the linkages of selected services to the production and consumption spaces, the roles of the states and transnational corporations and the networking of enterprises in promoting the services are focused on to highlight the challenges of globalization in the twenty-first century.

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Humanities & Social Studies Education (History)

SA861 – History and Popular Culture

This course deals with how history is represented or misrepresented in popular culture. Included are issues such as how accurate are historical films, how history is presented in museum exhibitions and school history textbook ideologies.

SA862 – Theoretical Frameworks in International Relations

This course seeks to provide a basic understanding of the three core theoretical approaches governing world politics. These are Realism, Pluralism (or Liberalism) and Marxism (or Structuralism). Each approach will be analyzed in terms of their strength, relevance limitations and implications to past and current world events. This analysis will be extended further to include an examination how each approach can help explain global issues such as conflicts, change, cooperation and the interplay between economics and politics. Additionally, the development and role of theory in the social sciences will also be discussed with particular reference to international relations.

SA866 – Issues in Contemporary Chinese History

This subject focuses on the key issues in Contemporary Chinese politics: military Communism to Deng's reforms, the Chinese Communist ideology (Marxism-Leninism, Mao's thought and De-Maoization), political institutions of the party-state, the cadre system (leadership style, factionalism and succession), Centralism versus Regionalism, the military's role in Chinese politics of modernization.

SA867 – Readings in Diplomatic and Military History

Students will be expected to master the major historiographic trends within their primary or secondary fields of study. The selection of readings will be tailored to the specific research objectives of the students and the specialization of the tutor.

SA870 – Multicultural Studies

Our globalising world implies that dealing with multicultural contexts has become an inevitable part of modern life and particularly life in a post-industrial and urbanized world. In Singapore the terms „multicultural“ and „multiculturalism“ have been used increasingly in recent years.

Multiculturalism has often also been assumed to speak only of race or ethnicity, but it is much more than that. Multiculturalism also addresses class, gender and other social structures. It also speaks of a frame of mind, of whether a society is pluralistic, that is, really open to and truly embraces diversity, of the multiplicity of voices that help to find a consensus that best guarantees equality and justice.

SA871 – Oral History and Memory

This subject covers the practice of oral history and theoretical issues that it raises. These include the nature of memory and how it is reconstructed in the present through reinterpretation. Also covered is the reliability of oral testimony generations after the historical events being discussed have passed. The relationship between oral history as a historical source and other sources, such as the written word is also assessed. Students will be introduced to the ways oral history has been represented, such as in museum exhibitions, community history, film and the media.

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SA872- Designing Inquiry-Based Social Studies Curriculum

This course will consist of two main components:

1. Historical research and a comparative historical study that investigates issues related to Venice and Singapore as city states. Research and the comparative study will focus on key issues and content central to Singapore's Social Studies Curriculum
2. Approaches to be in inquiry-based curriculum design and development. Different curriculum perspectives and designs will be studied to design an inquiry-based curriculum case study that can be used in Singapore's and other (e.g., US) social studies classroom

SA873 - Reading in Social Studies and Education

This course is for students who wish to establish a rigorous knowledge base in the area of social studies education and research. It is a tailored readings course that will be negotiated between student and instructor. Students will critically engage with the works of key scholars in the areas of education in general and social studies in particular. The course will develop critical reading skills and introduce students to strategies for writing a literature review. Students will be required to draw up a learning contract and a workable schedule for self-study and consultation. Assessment will be in the form of an annotated bibliography and two critical review papers.

SA874 - Seminar in Research in Social Studies

Participants will become acquainted with trends in research on social studies theory and practice. They will analyze significant research studies in the field, develop a personal research plan, and engage in the critique of one another's work. Each participant will craft a final problem statement and literature review focusing on their own research interests in policy, practice or theory. They will be expected to share their work with the group and to offer productive critiques of one another's efforts.

SA875 - Theories and Readings in Aspects of Imperialism

The course explores the theoretical grounding, critical perspectives (in forms, dimensions, and comparisons in imperialism), as well as special sub-topics and case studies in the theme of "imperialism", as they might be raised by the candidates. In the process, it is hoped that candidates enrolling in the course will not only have a fuller appreciation of the phenomenon, but for those engaging in further research, the discussions can serve to enrich and be applied to their thesis-writing.

SA876 Heritage Studies: Theory and Practice (Launch Aug 2012)

This course aims to explore the relationship between history and heritage. It examines how heritage focuses on using history for purposes of identity and tourism. Covered are the various theoretical conceptualizations of heritage, such as those of David Lowenthal, J. Tunbridge and G.J. Ashworth, David Throsby, and Laurajane Smith.

SA877 Readings in Late Imperial Chinese History (Launch Jan 2014)

This course is designed with doctoral graduate research students who intend to work on Chinese history in mind.

For any research student planning to work on Late Imperial China, it is extremely important for the candidate to not only be familiar with the historical sources, the various genres of sources and the textual nuances within these documents but also be sufficiently proficient in reading

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classical Mandarin. The skills of text interpretation and translation from classical Chinese into English would also be emphasized in this course. These are skill sets that are important to any candidate wishing to embark upon research on imperial China.

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Learning Science and Technologies

SE808 – Advanced Literature Review and Analysis

This course is designed to help students analyse and synthesize the literature for their respective research, thereby establishing the significance of their research proposal. The outcome of this course will therefore be a literature synthesis paper with clear articulation of gaps in the field of research of students' interests and strong justifications for the significance of the study. It will lay down a working structure for the literature review chapter for their respective proposals. Some advanced library skills will also be introduced.

SE809 – Advanced Special Topics in the Learning Sciences

How learning is distributed, mediated, contextualized, changed and supported in today's technologically dynamic society is a key area of concern for all educators. The Learning Sciences is a cross disciplinary field of study that investigate the phenomenon of learning. Based on the interests and backgrounds of the participants, this course will guide them to explore emerging areas of interests in the field. Some possible areas include collaborative learning and knowledge building in face-to-face and mediated environments, situated learning within immersive virtual learning environments and the development of multi-literacy.

SE810 – Advanced Qualitative Research Methodologies

While the Master's courses equip graduate students with basic qualitative research methods, PhD students usually need advanced methodologies to address their research questions. This course will focus on advanced qualitative research methodologies. Possible areas include phenomenology, grounded theory, ethnography, discourse analyses, hermeneutics and design research. It will also cover issues related to the establishment of trustworthiness in qualitative studies. The outcome of this course can form the foundation for the candidate's methodology chapter if s/he uses qualitative research methods in the research study.

SE811 – Advanced Quantitative Research Methodologies

Continuing from the Master's courses on basic statistical methods, this seminar exposes students to advanced quantitative methodologies for in-depth and meaningful data analysis and interpretation, required skills for PhD candidates. This course will focus on advanced statistical skills such as multivariate statistics, structural equation modelling, social network analysis and the principles of survey design. It will also cover issues related to validity and reliability of quantitative studies. The outcome of this course can form the foundation for the candidate's methodology chapter if s/he uses quantitative research methods in the study.

SE815 – Educational Philosophy

This course will investigate the aims of education and the means for achieving those aims. It will interrogate the many tacit assumptions that permeate the discourse of education. It will do so by considering aspects of metaphysics, values, ideologies, and practice that bear upon education and educational research. Students will engage deeply with seminal ideas of great thinkers in educational philosophy. They will develop a critical understanding of educational choices in relation to a space of possible alternatives for the development of educational capital and social good.

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Mathematics

SC861 – Topics in Analysis

Selected topics from functional analysis (Banach spaces and geometry of Banach spaces), real analysis (theory of integration), and topology.

SC862 – Topics in Algebra

Selected topics from commutative Algebra, category theory, ordered structures.

SC863 – Topics in Probability and Statistics

Selected topics in probability theory, stochastic processes, mathematical statistics (theory of estimation and hypothesis testing), applied statistics (regression analysis, time-series analysis, design of experiments, etc).

SC864 – Topics in Mathematics

Selected topics from real analysis, functional analysis, algebra and topology.

SC865 – Topics in Applied Mathematics

Selected topics from differential equations, mathematical modeling, optimization, computational science, probability and statistics.

SC866 – Topics in Mathematics II

Selected topics from real analysis, functional analysis, algebra and topology.

SC867 – Topics in Applied Mathematics II

Selected topics from differential equations, mathematical modeling, computational science, probability and statistics.

SC868 – Algebra and the Teaching of Algebra

The content of this module will be based on three main themes. Firstly, the role *structure* plays within the mathematical content of number and algebra will be discussed, for example, within the learning of number names, counting, early arithmetic, an awareness of rules and patterns, manipulation of algebraic expressions, and algorithms. In addition, consideration will be given to the deliberate use of structure within teaching approaches to number and algebra. A second theme looks at research in the area of teaching and learning of algebra. What are some of the misconceptions learners have of algebraic concepts. A third theme of the use of *technology* will look at calculators and specific computer software, and the implications of this technology on teaching and learning issues, along with implications this technology has for the number and algebra curriculum.

Throughout the course, links between number and algebra will be considered, along with problems relating to language and notation.

SC869 - Assessment in Mathematics

The content of this module will address three main areas. Firstly, the concepts and issues of assessment and alternative assessment will be examined from both a local and international

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perspective. Secondly, concepts, methods and functions of paper and pencil tests will be examined. Thirdly, the form and functions of alternative assessment will be rigorously examined. Throughout the course assessment of learning, for learning and as learning will provide an overarching organizing framework.

SC870 - Curriculum Studies in Mathematics

The course focuses on the nature of the school mathematics curriculum and the various factors that impact on it. Some of the topics that are discussed include curriculum models, curriculum design, and evaluation and assessment as they relate to mathematics education. Other areas also covered in the course include: the nature of mathematics, aims of teaching mathematics, curriculum development and curricular materials, major reforms in mathematics curricula in the world, international studies, development of specific areas of mathematics, socio-cultural issues and ethnomathematics. In particular, the implications of the above areas for the Singapore mathematics curriculum are a major aspect of the course.

SC871 - Development in Problem Solving in Mathematics

The content of this course is problem solving in mathematics. It will address research in the field from both a local and international perspective. Specifically the course will examine the variables: cognitive, metacognitive, affective, curriculum, teacher and classroom, of problem solving in mathematics. It will also examine the assessment of problem solving, the use of scales and rubrics to grade problem solving tasks.

SC872 - Fundamental Concepts in Mathematics

This course develops, through a series of historical case studies, an awareness of the origin of mathematical concepts, and how resulting mathematical solutions were interpreted in real terms. Particular emphasis will be placed on understanding the context in which mathematicians were working at the time they developed certain concepts and hence the variety of different mathematical concepts developed in different cultures at different times. Implications will be drawn for teaching of mathematics at Primary and Secondary level both with a view to improving current practice. Topics may be selected from the following areas: Counting, measure, geometry abstract algebra, analytic geometry probability and statistics.

SC873 - Geometry and Geometry Education

This course consists of two parts: Foundation of geometry and research ideas about teaching school geometry. The main objective is to provide the educators with knowledge about foundations of geometry, develop Euclidean geometry using axiomatic approach, introduce non-Euclidean geometry, and familiarise learners with relating research literature to the teaching of geometry. The overarching model that connects these two parts of the course is the van Hiele's theory of geometric reasoning. As educators, the course participants will experience working through the materials in the Primary-Secondary grades (for the purpose of *teaching* geometry at these levels) and tertiary grades (for the purpose of *learning* geometry at the advanced levels) that roughly correspond to the five levels in the van Hielean framework.

SC874 - Number Theory and the Teaching of Arithmetic

This course is designed to strengthen the understanding of number systems and terminology for effective teaching of arithmetic in schools. Number theory on divisibility, primes and congruences will be emphasized (for example, greatest common divisor, Euler's Theorem and the Chinese Remainder Theorem), as well as applications of number theory in check digits and

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cryptography. The focus will be to broaden teachers' repertoire and ability in designing mathematical tasks for investigation in the classroom.

SC875 - Research and Issues in Mathematics Education

Researchers and reflective practitioners in mathematics education should be acquainted with the crucial issues in the field. This course introduces them to the key theoretical frameworks, research methodologies, and specific findings about selected issues that are relevant to the Singapore context but also aligned with contemporary international trends. The issues include affect and beliefs, curriculum, problem solving, classroom teaching and learning, teacher professional development, use of ICT, and assessment. On the basis of this broad perspective, the students can select one major issue as their own research project.

The students will explore these issues through guided reading, class discussion, independent research search of the literature, and reflection through writing. They will demonstrate their learning by critically reviewing a significant issue and drawing implications for theory and practices related to the issue.

SC876 - Teaching and Learning Mathematics

Mathematics has always been a critical school subject but many students find it difficult and tedious to learn. Reforms in mathematics education all over the world have provided rich theoretical frameworks and strong research findings from which sound mathematics pedagogy can be developed and investigated. Furthermore, insights about mathematics teaching can also be analysed from many different disciplines, including psychological, sociological, philosophical and mathematical perspectives.

This course will deal with theories, research, and practices from well-known proponents such as Skemp, Dienes, Bruner, van Hiele, Skinner. General theories such as constructivism and information processing will be discussed in relation to practices and research in mathematics teaching and learning at the school levels.

SC877 - Using Technology in Mathematics Education

This course covers various aspects of ICT such as Dynamic Geometry software, Graphing utilities, Spreadsheets, Calculators (including Graphing Calculators), Computer Algebra Systems, and the Internet. Their role in providing practice and developing mathematical concepts will be examined and discussed. The focus will be on how these technologies have been or could be used as tools in the teaching and learning of mathematics in schools.

SPECIAL TOPIC COURSES

Natural Sciences & Science Education (Biology)

SC804 – Biotechnology and Microbiology

Growth mechanisms. In vitro Biology. Explant culture and micropropagation techniques. Organogenesis, somatic embryogenesis and protoplast culture. Genetic stability and variation: somaclonal. Genetic manipulation via transformation, cellular hybridization and mutagenesis. Control and alteration of metabolic pathways and hormonal metabolisms. Biotechnology of crop improvement and commercial application. Recombinant technology in medical sciences. Cellular defence mechanisms and immunology. Diagnosis using DNA probes, production of monoclonal antibodies. Transgenic animals. Microbial growth and manipulations. Fermentors and bioreactor systems. Microbes in health, disease, industrial, food and environmental applications. Fermentation technologies. Recent advances in rapid automation and detection methods for microbes.

SC805 – Molecular Biology

Topology of nucleic acids. Genetic regulation of prokaryotes: control at transcriptional and translational levels. Recombinant DNA technology: principles of gene isolation, cloning. Types of cloning vectors. DNA, RNA and

protein analysis methods. DNA sequencing and polymerase chain reaction. Dynamics of DNA in genomes. Satellite DNAs and molecular markers for differentiation. Transformation and transgenics in eukaryotes. Genes in the development of prokaryotes and eukaryotes. Scientific discussion and seminars are included.

SC806 – Population Ecology

Analyses of density and estimation of growth rates and parameters for species with age structure, and for open and closed populations; population dynamics and regulation; one species, and two-species (pairwise interactions) models; equilibrium density; deterministic dynamics; population dynamics with stable equilibrium point, with an unstable equilibrium point; metapopulation dynamics of rare species; stability, resilience, and resistance in stochastic systems; role of evolution, models in population ecology; application of population ecology in commercial harvesting of natural populations and environmental problems.

SC807 – Genetics

Transmission genetics. Mendel's laws of inheritance. Genes, phenotype, alleles and recombination. Structure and function of DNA, genes and chromosomes. The central dogma: DNA-> RNA -> Protein. DNA replication and recombination. Cloning and manipulation. Regulation of genes and its expression. Genetic codes and protein synthesis. Genes and development. Genetic analyses of viruses and bacteria. Extrachromosomal inheritance. Population and evolutionary genetics.

SC809 – Herpetology

Biodiversity, taxonomy, phylogeny, and biogeography of selected taxa, such as, amphibians, turtles and crocodilians, lizards and snakes. Thermal ecology and physiological ecology in squamate reptiles; energetics; foraging and trophic ecology; evolution of parasite-host relationship, and anti-predator adaptations; life history strategies; parental investments; reptilian assemblages and spatial organisation; homeostasis; population dynamics and modelling of endangered taxa.

SPECIAL TOPIC COURSES

SC810 – Advanced Molecular Genetics

Molecular cloning, different cloning and expression vectors, advanced molecular cloning and sequencing techniques. Application of modifying enzymes and different types of Taq polymerases, trouble shooting and cloning using PCR. Protein expression and purification technology. Current topics in molecular biology will be discussed and seminars will be conducted.

SC815 – Advanced Plant Physiology

The processes of plant adaptation to both abiotic and biotic environmental factors. The biochemical, physiological and morphological attributes of plants and the molecular mechanisms underlying the expression of these attributes. The topics will be learnt through lectures, cooperative learning, and discussion on selected current research literatures of plant physiology.

SPECIAL TOPIC COURSES

Natural Sciences & Science Education (Chemistry)

SC801 – Trends in Chemical Science and Technology

The chemical trade and industry of Singapore, petrochemical and pharmaceutical industry their allied industry. Modern chemistry and technologies pertaining to environmental pollution, chemical waste management and good practices. Small chemical producers and businesses. This module is intended to give students a comprehensive understanding of the contributions of chemical science and technology to the national economy and policy of Singapore. Course content may vary from year to year.

SC821 – Physical Methods In Structural Elucidations

Principles of electronic absorption spectroscopy, nature of radiation, ground states and excited states and selection rules. Simple symmetry treatment of molecules leading to IR/Raman active modes. Mass spectrometry, principles and simple fragmentation patterns. Magnetic susceptibility measurements and magnetic behaviour of inorganic compounds. Magnetic resonance spectroscopy, principles and interpretation of nuclear magnetic resonance NMR spectra (proton and other common nuclei), electron magnetic resonance ESR spectra.

Rationale:

The subject is designed to equip graduate students with principles of spectroscopy to enable them to determine the purity of their chemical products and also to interpret spectral data obtained in the course of their research work. This is particularly useful to graduate students who do not have a strong background on principles of spectroscopy yet have to rely heavily on such knowledge for their work. The course however does not intend to specialize on any one spectroscopic topic.

SC829 - Plant Secondary Metabolites

Traditionally, secondary metabolites from plants play a major role in drug discovery for the treatment of various human ailments. By understanding the various classes of these biomolecules as well as its mode of action, it would help students appreciate the importance of plants as potential drug source.

SC830 - Bioactive Natural Products and Their Derivatives

The main rationale for introducing this course to highlight the importance of natural products as an important source for drug discovery and development. Various aspects of natural products, including the chemistry and its biosynthesis, will be emphasized. The emergence of multi-drug resistant strains of pathogenic bacteria as well as drug resistant cancer forms underscore the importance of natural products as therapeutic agents.

SC831 - Chemical Zoology

Chemical communication is a fascinating topic that entails the understanding of various bioorganic molecules and its ecological functions. By dissecting the function(s) of these natural molecules, it would lead to better understanding and appreciation of the dynamic interactions between organisms.

SC832 - Polymer Chemistry and Biomaterials

This is an advanced course which emphasizes the fundamentals of polymer chemistry, colloids, self assembly and biomaterials science. In order to understand and appreciate the

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macroscopic properties of materials and their applications in life sciences a complete understanding of the properties in molecular level is crucial. In this course, the fundamental physical principles that lead to the observed macroscopic properties of polymeric materials in life sciences will be discussed in detail. The latest development in this field will also be highlighted and updated.

SC833 - Synthetic and Catalytic Organic Chemistry

This graduate course is focused on the rapidly expanding developments in organic synthesis and is appropriate for graduates in chemical sciences, pharmacy or related disciplines. It will provide students with a good foundation in synthetic chemistry with an emphasis on stereoselective synthesis and applications to complex molecule synthesis. It will also benefit those initiating or enhancing their career progression within the pharmaceutical, synthetic research and academic professions.

SC834 - Bioinorganic Chemistry

The role of metals in biological systems is an area of great interest to chemists and biologists alike. Life in its present form would not be possible without the involvement of the metallic elements. This course deals with the key ways in which metals participate in biochemical processes, focusing on biomolecules that incorporate metal atoms in their molecular structures. The ways in which the chemical properties of selected metals define the biological function of the systems they are found in will be discussed. Important applications of inorganic and coordination chemistry in medicine will also be highlighted.

SC835 Fundamentals and Applications of Material Science

This is an advanced course which emphasizes the fundamentals of material science and advanced characterization methods for material characterization. In order to understand and appreciate the macroscopic properties of materials and their applications in life sciences a complete understanding of the properties in molecular level is crucial. In this course, the fundamental physical principles that lead to the observed macroscopic properties of materials such as metals, ceramics, glass, and polymers will be discussed in detail. The latest development in this field will also be highlighted and updated.

SPECIAL TOPIC COURSES

Natural Sciences & Science Education (Physics)

SC841 – Dimensions of World Energy Problem- Role of Plasma Fusion

This subject surveys the various sources and resources of energy available to the world. It looks at historical consumption pattern and projects world requirements into the future, using various scenarios. It is apparent that within a century from now, new sources of energy will be needed. The strongest candidate as a long-term solution is fusion energy from plasmas. The historical route of science towards the present status of world fusion programmes will be traced. Large programmes will be briefly described, as will small programmes which have led to international scientist-to-scientist collaboration, resulting in networks which have strengthened research capacity in developing countries leading to many applications as spin-offs to the research on fusion plasmas. Thus a scenario is sketched in which the long-term energy problem of the world is solved, ensuring continuity in the progress of human civilization. At the same time many important applications related to advanced materials, microelectronics, radiation and the environment are also brought to fruition.

SC844 – Plasma Diagnostics

Measurements of amplitudes and phases of rf current and voltage. Wire-wound and Hall magnetic probe diagnostics. Langmuir probe measurements for plasma density, electron temperature, plasma potential and electron energy/probability distribution functions. In-situ optical emission spectroscopy of plasma species. Mass spectroscopy of radicals and non-radical neutrals in chemically active plasmas.

SC849 – Quantum Computation

Quantum Computation is an emerging interdisciplinary field that with great potential as the next generations of computer technology. It is not merely able to miniaturize the storage capacity of conventional computers; it is also able to perform certain task deemed computational hard in classical computer. This course aims to provide an overview of this emerging field with sufficient rigor for a working in this area

SC853 – A Primer to Quantum Cryptography

Secure and robust communication systems based on quantum devices have experimentally been demonstrated and shown to be viable commercially. The module covers some rudiments regarding quantum mechanics; an introduction to classical and quantum cryptographic scheme and a brief discussion of experimental work in this field.

SPECIAL TOPIC COURSES

Natural Sciences & Science Education (Science Education)

SC883 – Interaction and Discourse in Education Research

This course is designed to introduce alternative means of examining educational practices in schools. Educational activities are complex and hence difficult to make sense of them. We argue here that there is more than one way to examine educational practices. Examination and assessment grades of students are a common way to „prove“ the success of an educational activity. However, merely focusing on grades as a measure of educational success is limiting as it disregards the processes which students and teachers journey through. The social dimension of the educational experience, if ignored, presents education as a purely cognitive and individualistic activity. In this course, students will be exposed to alternative ways of understanding educational activities by examining the talk and interaction between learners and teachers.

SC884 – Mixed Methods Inquiry in Science Educational Research and Evaluation

“Mixed methods” is often misunderstood as simply making qualitative and quantitative methods. In this course, we talk about “mixing” at sophisticated levels involving methods, methodologies, and/or theories and paradigms to strengthen a research design and argue the rationale for the mixing. This course is designed to address the theory and practice of mixing inquiry methods and methodologies in science educational research and curriculum/program evaluation. The topics covered will include the argument for mixing methods, different concepts of mixed methods design, analysis, and practice, and challenges involved in mixed methods practice. Selected evaluation theorists will be introduced and their evaluation advocacies will also be discussed. The emphasis of the course is on practice and will feature critiques of empirical work primarily in science but not excluding other educational contexts.

SPECIAL TOPIC COURSES

Natural Sciences & Science Education (Inter-disciplinary)

SC885 – Biosensors: Theory and Applications

This is an interdisciplinary course involving chemistry and biology, and some fabrication engineering knowledge. It will be a useful broad based course for PhD students so that students can appreciate the roles, functions, working principle of biosensors which serve many potential application areas: e.g. clinical, environmental, food and defense areas. Students will appreciate the roles of biosensors for various applications: historical development until the present; apply relevant transducing principles for the development of appropriate biosensors for different types of analytes; apply suitable chemical principles for the immobilization of bioreceptors; and assess the applications of biosensors to suit different application areas based on different parameters.

SPECIAL TOPIC COURSES

Policy and Leadership Studies

SA943 – School Reform and Leadership: Policy and Practice

The course is designed to equip participants with rudimentary skills in appreciating the myriad issues related to school reform and leadership and their implications to educational policy and practice. Participants would be introduced to the foundations of leadership amidst dynamic school reform enabling them to critically explore the issues of a constantly shifting policy context. Participants would be made familiar with the challenges of leadership and implementation of policy allowing them to critically investigate implications to school practice

SA944 – Interdisciplinary Thinking for Education

The major trends of the 21st century indicate that although the sequential, literal, functional, textual, logical and analytical thinking skills that enabled us to excel in the 20th century are still going to be important and necessary in the 21st century, they are no longer sufficient if our aim is to be a global leader in our chosen fields of specialisation. The key concerns, events and developments of the last 10 years have shown very clearly that we also need to interpret and understand things in inventive, simultaneous, metaphorical, aesthetic, contextual, empathic and synthetic ways if we want to continue to experience growth and success in the 21st century. The implication for education (formal, informal and non-formal) is that we will have to make significant modifications to what and how we learn and teach. Only then can we adequately prepare ourselves and others for professional success in the 21st century. A recommended change is to introduce into our educational curriculum a component that aims to teach for creative, empathic and meaningful applications of logical thinking skills, subject-specific inquiry techniques and subject-specific content knowledge. This requires breaking through traditional disciplinary boundaries and innovating in an intermediate zone where such boundaries do not properly apply. There is therefore a need for a course that focuses on interdisciplinary thinking for educators.

SA945 – Critical Ethnography in Educational Research

Although qualitative research method has gained more prominence and acceptance in the field of educational research, postgraduate students are generally less cognizant of the epistemology and ontology that underpin the designs or approaches to qualitative research. This is partly due to the predominance of the positivist paradigm that underpins quantitative research. Postgraduate students, who are unfamiliar with the epistemological and ontological underpinnings of the positivist paradigm, may inadvertently use this paradigm to make sense of qualitative data. A strategy that could be used to expose postgraduate students to alternative paradigms such as the interpretive or critical paradigms is by introducing critical ethnography. In this regard, a course on critical ethnography will enable postgraduate students to understand both the interpretive and critical paradigms at one go. Ethnography has been commented by some researchers to be qualitative research at its best. It incorporates data collection and analysis approaches such as observation, interview and artifact analysis, and epistemological and ontological underpinnings within the interpretive paradigm. Critical ethnography then adds epistemological and ontological concepts pertaining to the critical paradigm to ethnography, along with implications to the entire research process.

SA946 – Advanced International Perspective in Mentoring

This course will benefit candidates who seek to maximize the advantages of adult learning in an evolving mentoring paradigm. Mentoring engagement in human resource development has the vast potential to facilitate being on the leading edge of desired change in creative re-positioning. Analysis and synthesis of such development strategy necessitate an exploration of fluidity and distillation of essence across international borders. The numerous generic and local

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complexities as well as probable strategies to overcome pitfalls will be examined. The role of mentoring in the 21st century and beyond will also be illuminated and challenged.

SA947 – Strategic Organisational Management and Development in Schools

As the world enters the 21st century and faces increasing challenges as a consequence of globalization, organizational leaders have acknowledged that their organizations need to be flexible and seek to renew themselves to meet such dynamic forces. Organizations face constant innovation and transformation aimed at enhancing organizational effectiveness. Ultimately, the goal of strategic organizational management and development are to ensure the organization continues to achieve a high level of competitiveness by operating more effectively and efficiently, while providing more opportunities for individuals to develop their full potential.

SA948 – Teachers as Reflective Practitioners: A Critical Perspective

The notion of the reflective practitioner is a common and dominant discourse in education. Originally conceptualized as a way of describing how professionals (should) think in, and with, their expertise, the 'reflective practitioner' has since been discursively constructed and situated for a variety of different purposes. These include the pursuit of other agendas such as performativity, discipline and confession, and the reduction of teacher identity and expertise as disparate competencies.

This course invites its participants to understand the originating tenets of the reflective practitioner in order to critically judge its contemporary manifestations.

SA949 – Qualitative Data Analysis (Aug 2012)

This course is designed for participants who have a basic knowledge of qualitative research methods and are interested to explore more advanced analytical techniques and procedures to help them make better sense of their qualitative data. Given the increased use of verbal and visual data in social science and educational research, either on its own or as part of mixed methods, there is a pressing need for researchers to develop a more critical stance towards qualitative data and the findings it generates.

SA950 – 21st Century Education (Aug 2012)

The processes of globalisation and their consequences defy geographic and political boundaries and therefore have reshaped the world in business, education, government and private sectors. Globalisation has redefined the relationships among nation-states, international institutions, governmental and non- governmental organisations, ethnic, cultural and religious groups that. It brings with it opportunities and threats for every country and its education system. Global forces such as increasing population movement and the exponential increase in technology have opened doors for those who are highly mobile, highly skilled and highly educated and at the same time removed those who are poorly or inadequately educated. Given these changes, there is a need for a course that studies the global trends and how they affect the construction and delivery of educational programmes.

SA991 – Advanced Educational Research and Evaluation

The purpose of this course is to continue the development of students' knowledge and effectiveness in conducting data analyses they apply to inquiry in the social sciences. Inquiry includes the process by which educational phenomena are understood, the specification of models for that understanding, the assumptions of those models, and the linkage between theories, concepts, researchable problems, and methods of analysis. The choice of analytic

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approach as part of the research process is not routine and, therefore, is often open to discussion.

More specifically, this course is intended to introduce students to advanced means of analyzing data, including data collected at one point in time (i.e., cross-sectional), several points in time (longitudinal), or at different organizational levels (e.g., students in class, classes in schools). Some of these methods include factor analysis (exploratory and confirmatory), multivariate analysis of variance (MANOVA), repeated measures designs and basic multilevel models. Moreover, the course is designed to help students acquire facility in the use of the computer to analyze data, focusing specifically on the SPSS Windows statistical package.

SA992 – Issues in Educational Marketing (Aug 2012)

As the new millennium progresses, the educational climate continues to evolve into one that is becoming progressively complex yet exciting at the same time. Owing to easier access to information and exposure to a wider range of educational services, students and their parents are becoming more sophisticated and expect more in relation to their educational experiences. Gone are the days when education is seen as public service to a homogeneous group of customers. As a result, diversity in offerings may very well represent the key to a school's success, future growth and possibly competitive advantage in the education industry. The aim of this course is to explore the contemporary and emerging development in educational marketing, and to introduce students to the latest theories in 'marketplace' and 'academic' thinking. Upon completion of this course, participants will be equipped with cutting edge marketing knowledge, concepts and practical applications in solving school operational and strategic problems. This course is also designed to allow participants to develop their marketing knowledge, by drawing the subject matter from various topics such as consumer behavior, international marketing, services marketing, social marketing, public sector marketing, and societal marketing. These topics will reflect popular debate.

SA993 – Building Citizenship Values Through Sustainability Education (Aug 2012)

Teaching and learning about social and environmental challenges, and the ways these are related to social and economic systems, is vital for developing students who have the knowledge, skills, perspectives, and values to make responsible lifestyle choices in a community-based context. Environmental education, a vital aspect of the United Nations Decade of Education for Sustainable Development (2005-2014), is an effective multi-disciplinary approach that educators can take to help young people understand the nature and complexity of environmental challenges and help build student capacity to make responsible decisions for appropriate practices that contribute towards the building of healthy communities, and hence, active citizenship.

This course will be useful to candidates who see the importance of, and welcome the opportunity to, analyze current needs and research possible relevant approaches to building capacity for environmental leadership in Singapore schools/institutions while also fostering greater community engagement in promoting changes in individual action and organizational practices.

SPECIAL TOPIC COURSES

Psychological Studies

SA971 – Advanced Topics in Applied Cognitive Developmental Psychology

The latest empirical findings and theories in cognitive developmental psychology will be examined in this course. A specific focus is the development of working memory and executive functioning. Other topics that may be covered are the development of attentional processes, knowledge representation, and the neural substrates of behaviour. Relating cognitive development to childrens academic performance will be a particular focus of this course.

SA972 – Advanced Research Methodologies in Psychology

Recent advances in research methodologies are studied using a series of readings and exercises. Topics may include longitudinal designs, functional magnetic resonance imaging, and the use of multivariate techniques in applied research settings.

SA973 – Advanced Topics in Creativity and Talent Development

This module aims to present the state of art and new understanding of creativity and talent development. The topics include identification, diagnosis and counseling of potential talented students and talented students with learning disabilities. The new approaches highlight the total talent or strength development for all students, positive growth, individualized counseling, improved academic achievement, and engaged learning paths. The module also examines successful creativity and talent development projects, school-based programs, services, interventions, mentoring, curriculum and creative pedagogies.

SA974 – Social Emotional Learning: Curriculum Development and Research

Social and emotional learning (SEL) is a process for helping children and even adults develop the fundamental social-emotional competencies for life effectiveness. SEL programming teaches the skills we all need to handle ourselves, our relationships, and our work, effectively and ethically. These skills include recognizing and managing our emotions, developing caring and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively. This course focuses on research, theory, educational practices that promote the social, emotional, and academic competence of preschool through young adults.

An examination of research-based strategies and practical approaches that policy makers, educational administrators, teachers, mental health professionals, and parents can implement to foster the optimal development of children and adolescents. Participants will learn about current evidence-based SEL programming in schools locally and internationally for curriculum implementation purposes.

SPECIAL TOPIC COURSES

VISUAL & PERFORMING ARTS (ART)

SA901 – Art and technology

The different technologies of image-making, past and present, have offered various possibilities (and constraints) for the manipulation of imagery, the expression of ideas and the representation of the world. This topic will involve students considering a range of technologies available in past and present times for the making of art, including some traditional art materials, the technologies of print, and also electronic media. In both theoretical and practical work, students will consider the variety of ways technologies have shaped the expression of ideas and emotions.

SA902 – Reviewing and interpreting exhibitions of artworks

This involves the critical appraisal and review of artworks in an exhibition. The project will entail study of a range of approaches to the interpretation and analysis of artworks. To this end, students will be expected to acquaint themselves with key writings on the study of meaning in art works and theories of interpretation and analysis. The project will culminate in students preparing a written review of an exhibition of artworks.

SA903 – Performance and time-based art

This topic will entail the study of performance, movement, dance and other time-based art forms and their potential for the expression of ideas and feelings. The topic will involve studies of some aspects the history of performance art and dance, and will culminate in the students presenting a time-based, performance work or dance.

SA904 – Artmaking and Aesthetics Inquiry

This module explores contemporary aesthetics studies in the visual arts. Implications about current visual theories and their application to art processes will be considered. The final project constitutes a commitment in working with a body of original work taken through to exhibition status.

SA905 – Visual Arts Research Methods

This module examines the history of the discipline and explores various methodologies, critical theory, and resource material for visual arts research. This involves techniques of scholarly and critical writing and evaluation of bibliographic sources. At the same time the conceptual and theoretical issues attending the integration of technology into visual arts research are explored.

SPECIAL TOPIC COURSES

VISUAL & PERFORMING ARTS (MUSIC)

SA881 – Music Composition

The main project involves a composition by each participant. Genres chosen are subject to practical performance considerations. Seminar sessions are based on the presentation and discussion of works-in-progress by the participants as well as their completed compositions, focusing on compositional approach and technique as well as analysis. Selected works representing a range of recent “movements” in composition will also be studied. The course will also involve studying procedures used during the rehearsal of the composition projects and will culminate in a performance recital of the participants’ works.

SA882 – Music Analysis

A study of various analytical concepts and methods applicable to music from the common-practice period and the twentieth century. Major analytical theories will be introduced and their merits evaluated so that appropriate analytical approaches can be adopted according to the analytical demands at hand. Meta-theoretical issues will be considered.

SA883 – Performance Studies in Music

A written submission of about 5000 words on one of the following areas:

- i. Studies in theoretical accounts of instrumental technique and performance practice;
- ii. Studies of repertoire of a particular period in relation to performance practice and instrumental technique;
- iii. A study of a single substantial work with implications for performance practice and instrumental technique. A lecture and public recital of the works discussed in the written submission.

SA884 – Performance Studies in Ethnomusicology

The candidate will undertake studies in one instrument of a specific musical culture. This will culminate in a public solo or ensemble recital of about 30 minutes accompanied by a presentation about the ethnic instrument. (A recording may be admissible under certain circumstances)

SA885 – Aesthetics and Philosophy in Music

This module is concerned with the way in which music is viewed from perspectives in aesthetics and philosophy. This module makes a selection from the notated and non-notated repertoire of western art music as well as the art and folk music traditions around the world. A discussion of the practice of music is the starting point for this module, although greater emphasis is placed, from an interdisciplinary perspective, on the critical implications of viewpoints expressed by practitioners, philosophers, theorists and aestheticians.

SA886 – Research in Musicology

An introduction to musical historiography, giving the student a good foundation for research in musicology. The course will help the student acquire basic music research skills. At the same time, the history of the discipline and more recent trends in the field will be discussed to help the student contextualize his/her own research.

SPECIAL TOPIC COURSES

SA887 – Advanced Music Research Topic

This module offers the student a chance to explore in some detail a second topic besides the dissertational one. This can be a more advanced study on a specific topic in the area of Music Education, Musicology, Ethnomusicology, Music Theory, or any music-related subjects including interdisciplinary ones.