



POSTGRADUATE DIPLOMA IN EDUCATION

JAN - DEC 2008

Nanyang Technological University
National Institute of Education
1 Nanyang Walk
Singapore 637616
Republic of Singapore
Telephone: 67903888
Fax: 68969274

NTU Reg. No. 200604393R

ISSN 0218-3196

November 2007

ENQUIRIES

All enquiries on admission to programmes offered by NIE are to be directed to:

Head
Foundation Programmes Administration
Foundation Programmes Office
Nanyang Technological University
National Institute of Education
1 Nanyang Walk
Singapore 637616

or visit the NIE homepage at:

<http://www.nie.edu.sg>

Because of the large number of candidates seeking admission, we regret that we are unable to entertain any telephone or personal enquiries.

Contents

	Page
 General Information	
Introduction	2
Applications	6
Examinations, Assessment of Coursework & Practicum	8
 Academic Structure of Programme	
Structure of PGDE Programme	15
 PGDE Programme Specialising in Secondary School Teaching	
Curriculum Structure	20
Contents of Core Courses and Prescribed Electives	24
<ul style="list-style-type: none"> • Education Studies • Curriculum Studies • Practicum • Language Enhancement and Academic Discourse Skills 	24 38 63 64

The information in this handbook is based on information available at the time of publication. The Institute reserves the right to make alterations without notice.

GENERAL INFORMATION

INTRODUCTION

The National Institute of Education offers a postgraduate teacher preparation programme leading to the award of the Postgraduate Diploma in Education (PGDE) of the Nanyang Technological University. The one-year full-time programme beginning in January 2008 provides for some degree of specialisation in secondary school teaching.

This PGDE programme is administered by the Foundation Programmes Office which is committed to developing educational professionals to be leaders in the service of learners.

Aims of PGDE Programme

The programme aims to prepare teachers who are **well-informed, competent, and thinking professionals**. These teachers will have an understanding of the key concepts and principles of teaching and learning and should be able to **implement, analyse and theorise** about key instructional processes.

The PGDE programme is designed to prepare student teachers to:

- (a) have the knowledge and skills to teach two secondary schools subject, depending on the specialisation;
- (b) be aware of and sensitive to the needs, abilities, interests and aptitudes of students in schools;
- (c) be able to teach students of different abilities, interests and backgrounds effectively and creatively;
- (d) be committed to the nurturing and development of the students in their charge; and

- (e) be committed to self-initiated and sustained professional development.

Duration of Programme

The PGDE programme is of one academic year's duration (an academic year consists of two semesters). It leads to the award of the Postgraduate Diploma in Education, with specialisations in secondary education. Student teachers specialising in Secondary Education are further sub-divided into two categories: "General" and "Language Specialisation".

The Academic Unit System

The Institute adopts the Academic Unit System. Academic Units are used to measure academic workload per semester and per academic year. The academic year is currently divided into two semesters.

The Academic Unit (AU) provides a consistent measure of the student teacher's academic workload related to both class attendance and independent preparation. Used to weight courses in a subject taught for the duration of one semester of 13 teaching weeks, each Academic Unit represents an average workload of one hour per week in the form of lecture/tutorial classes, or three hours per week in the form of laboratory/field sessions. For example, a typical course with one lecture hour per week and one tutorial hour per week carries 2 AUs. Academic Units are calculated on a course basis, that is, subjects are made up of courses and each course carries a certain number of AUs.

Academic Calendar

The academic year is made up of two semesters as follows:

Programme	Dates of Orientation (O) / Semester (S) / Recess (R) / Vacation (V)	Dates of Revision / Examination	Dates of Practicum
PGDE (S) (Jan 2008 Intake)	O: 02 Jan 2008 – 04 Jan 2008 S1: 07 Jan 2008 – 23 May 2008 V: 24 May 2008 – 22 Jun 2008 S2: 23 Jun 2008 – 28 Nov 2008 R: 30 Aug 2008 – 07 Sep 2008	- Compulsory Enrichment Programme up to 28 Nov 2008	Nil 23 Jun 2008 – 29 Aug 2008 (10 weeks of Teaching Practice)

APPLICATIONS

Application through the Ministry of Education

Candidates can apply for entry into the Postgraduate Diploma in Education programme through the Ministry of Education, Singapore. Successful applicants will be provided sponsorship by the Ministry and will have to abide by Ministry's terms and conditions. Application for admission must be made online through the Ministry of Education website at [**http://www.moe.gov.sg/teach**](http://www.moe.gov.sg/teach)

Direct Application to NIE

Candidates can apply for entry into the Postgraduate Diploma in Education Programme directly to NIE on a full fee-paying basis. Application forms can be downloaded from the website at [**http://www.nie.edu.sg/foundation/admissions**](http://www.nie.edu.sg/foundation/admissions)

Application Closing Date

The programme commences in January. Although applications are accepted throughout the year, it is advisable to submit applications early to be considered for admission.

Entry Requirements for the PGDE Programme

To be considered for admission, applicants should have at least a degree from the Nanyang Technological University, the National University of Singapore or other universities whose degrees are acceptable to the education service of Singapore.

Applicants may be required to sit for the Entrance Proficiency Test and other tests.

NO STUDENT TEACHER MAY PURSUE CONCURRENTLY ANY PROGRAMME OF STUDY AT ANOTHER INSTITUTION OF LEARNING WHEN ENROLLED AS A FULL-TIME STUDENT TEACHER AT THIS INSTITUTE.

EXAMINATIONS, ASSESSMENT OF COURSEWORK & PRACTICUM

Different modes of assessment have been built into the coursework. These include tests/practical tests, assignments, project work, progress ratings and examinations. Examinations will be held at the end of each semester. There are no supplementary examinations. No special examination will be held for student teachers who are not able to take any paper because of illness or other special reason. They will be allowed to take the examination only on the next occasion when it is conducted.

Student teachers must successfully complete all the prescribed academic unit requirement as set out by the programme curriculum and earn a minimum Cumulative Grade Point Average (CGPA) of 2.00 at the end of the final semester of study before qualifying for the award of the Postgraduate Diploma in Education. Student teachers are responsible for ensuring that they register for all the courses and examinations necessary to fulfil the requirements of their programme of study. Student teachers are not allowed to retake an examination in order to improve on the grades of courses they have passed. The grades for a course taken by any student teachers in all attempts are reflected on the official transcript. The Postgraduate diploma classification will be based on the CGPA student teachers obtain throughout their programme of study as well as performance in Practicum. Credits earned in other approved institutions will be excluded from CGPA computation. Under normal circumstances, no candidate will be permitted to take more than two years to complete the programme of study and pass the examination for the Postgraduate Diploma in Education.

Grade Point Average (GPA) System

The Grade Point Average (GPA) system is applicable to all student teachers admitted to Year 1 with effect from the Academic Year 2005-2006.

- 1 Grade and grade points are assigned as follows:

Letter-Grade	Grade Point	Academic Unit (AU)
A+	5.00	AU is earned
A	5.00	
A-	4.50	
B+	4.00	
B	3.50	
B-	3.00	
C+	2.50	
C	2.00	
D+	1.50	
D	1.00	
F	0.00	No AU is earned

- 2 The following non-letter grades and notations are also used, but will not be counted in computation of CGPA:

*	-	Courses with Pass/Fail grading only
IP	-	In-Progress
ABS	-	Leave of absence granted
TC	-	Transfer Credit
DIST/CR/P/F	-	Distinction/Credit/Pass/Fail (Grading for Practicum only)

- 3 The Cumulative Grade Point Average (CGPA) represents the grade average of all courses (including failed courses) attempted by a student teacher.

The computation of CGPA is as follows:

$$\frac{[\text{Grade Point} \times \text{AU for course 1}] + [\text{Grade Point} \times \text{AU for course X}] + \dots}{[\text{Total AU attempted in all the semesters so far}]}$$

- 4 The CGPA will be reflected on student teachers' transcripts.
- 5 An 'F' grade obtained in a course, and a new grade attained for the subsequent repeat, will be both reflected on the transcript. Both grades will also be counted in the computation of CGPA. No AU is earned for courses with 'F' grade.
- 6 Student teachers are not allowed to repeat any courses taken except those with 'F' grade.
- 7 **The requirements for graduation are as follows:**
 - a) Successful completion of the prescribed academic unit requirement as set out by the programme curriculum.
 - b) A minimum CGPA of 2.00 is required at the end of the final semester of study.
- 8 **The criteria for satisfactory academic standing in any given semester are:**
 - a) Maintaining a minimum CGPA of 2.00
 - b) Completing at least 75% of the normal AU workload
- 9 **Student teachers with poor standing will be subjected to the following performance review:**
 - a) Academic Warning – if the CGPA falls below 2.00 for any given semester.

- b) Academic Probation – if the CGPA falls below 2.00 for the following semester
- c) Academic Termination – if the CGPA falls below 2.00 for the 3rd consecutive semester, or at the end of the final semester of study. A letter of termination will be issued.

Appeal against termination on the grounds of extenuating circumstances may be made, subject to the following rules:

- the appeal must be submitted to NIE by the end of the 1st week of the semester following the termination
 - normally only one appeal is allowed per candidature.
- 10 A minimum CGPA of 2.00 must be maintained at the end of each semester to qualify for the overloading of courses.
- 11 The cut-off for PGDE classification is as follows:

Class of Award	CGPA Range	Minimum Final Practicum Grade
Distinction	4.50 – 5.00	Credit *
Credit	3.50 – 4.49	Pass *
Pass	2.00 – 3.49	Pass

- * The final Practicum Grade is based on the grade obtained at the first attempt for Practicum. A student teacher who fails at the first attempt for Practicum but subsequently passes it is only eligible for the Pass Award for PGDE regardless of the grade obtained for repeat Practicum and the CGPA obtained.

Group Endeavours in Service Learning (GESL) Project

Group Endeavours in Service Learning (GESL) is a compulsory project work that all student teachers are required to undertake. Student teachers in an assigned group are to collaboratively complete a project in a community service within the programme of study. Student teachers will benefit from the GESL experience in acquiring generic knowledge and skills of project management in service-learning. Groups will showcase their completed projects and a record of GESL involvement will be issued at the end of the programme.

Talks, Seminars, Workshops and Other Activities

During the period of training, student teachers are expected not only to study diligently but also to participate actively in talks, seminars, workshops and other activities organised for them, such as the National Education programme and the Induction Seminar. These activities form an integral part of the programme.

Plagiarism and Copyright

The Institute advises all student teachers to respect all copyrighted works and encourages the purchase of original textbooks and/or other copyrighted materials that are required for your programme of study. Student teachers should not plagiarise or pass off as one's own, the writing or ideas of another, without acknowledging or crediting the source from which the ideas are taken.

The Institute takes a serious view of any form of plagiarism and infringement of copyright by student teachers. A contravention of the provisions of the Copyright Act is deemed to be a breach of the Institute's rules and regulations, which could result in disciplinary action. Cheating, plagiarism and other forms of academic dishonesty are considered serious offences for which disciplinary penalties will be imposed.

ACADEMIC STRUCTURE OF PROGRAMME

STRUCTURE OF PGDE PROGRAMME

Core Courses & Prescribed Electives

The main areas of study for the PGDE programme are classified under core courses and prescribed electives:

Core Courses : Compulsory courses that must be passed to fulfil programme requirements;

Prescribed Electives : Electives that form a certain field of specialisation in a particular subject. They add to the depth and/or breadth of knowledge and skills to be acquired by student teachers.

Each course is assigned **academic units (AUs)**. Minimum AU requirements for completing the PGDE programme are shown in Table 1 below:

Table 1 : A Summary of the Academic Unit Requirements for the PGDE Programme

Programme	Specialisation Section	Year of Study	Core Courses, Prescribed Electives & Practicum	Total
PGDE	Teaching General Subjects at Secondary Level	1	40	40
	Teaching of CL at Secondary Level	1	42	42

Contents of Programme

The Postgraduate Diploma in Education programme comprises four main components of study:

- (a) Education Studies
- (b) Curriculum Studies
- (c) Practicum
- (d) Language Enhancement and Academic Discourse Skills (LEADS)

Education Studies

Student teachers will learn the key concepts and principles of education that are necessary for effective teaching and reflective practice in schools. They will also have the opportunity for in-depth study of some significant aspects of education.

Curriculum Studies

Student teachers will specialise in the methodology for teaching at secondary school level. These are designed to give student teachers the pedagogical skills in teaching specific subjects in Singapore schools.

PGDE (Secondary)

PGDE (Secondary) student teachers will specialise in the methodology for teaching two subjects at secondary school level.

Those specialising in **Teaching Chinese Language at the Secondary level** will offer the following Curriculum Studies subjects:

CS1: The Teaching of Chinese Language

CS2: The Teaching of Chinese Literature

Practicum

This group of courses is compulsory and is to be taken by all student teachers.

Language Enhancement & Academic Discourse Skills (LEADS)

This component is aimed at improving the use of oral and written language in teaching.

**PGDE PROGRAMME
TEACHING AT SECONDARY LEVEL**

CURRICULUM STRUCTURE

The curriculum structures for various specialisations of the PGDE (Secondary) programme are shown in Tables 2 and 3 below:

Table 2: Curriculum Structure of the PGDE (General, Secondary) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED520	Educational Psychology I: Theories and Applications for Learning and Teaching	2
	QED521	Educational Psychology II: Providing for Individual Differences in Learning and Teaching and Classroom Management	2
	QED522	ICT for Engaged Learning	2
	QED523	The Social Context of Teaching and Learning	2
EDUCATION STUDIES (Select 1)			
	QED560	Computer Supported Collaborative Learning	2
	QED561	Technologies as Cognitive Tools	2
	QED562	Designing Effective Learning Environments	2
	QED563	Games and Simulations for Learning	2
	QED564	Designing for Communities of Practice	2
	QED565	Surviving and Thriving as a Beginning Teacher	2
	QED566	The Learning School: Innovation and Enterprise	2
	QED567	Creating Connections in the School Community	2
	QED568	Exploring Issues in Philosophy of Education	2
	QED569	Teachers as Leaders	2
	QED570	Multiculturalism in Singapore Schools	2
	QED571	Schooling in Meritocratic Societies	2
	QED572	Moral Education Across the Curriculum	2
	QED573	Psychology of Learning and Motivation	2
	QED574	Assessment and Alternative Assessment to Promote Thinking	2
	QED575	From Extrinsic Motivation to Passion: Diversified Approaches to Learning	2
	QED576	Developing Creativity in the Secondary Classroom	2
	QED577	Counseling and Guidance in Secondary Schools	2
	QED578	Youth At-Risk: From the Classroom to the Courtroom?	2

Cont'd

Category/ Subject	Course Code	Title	No. of AUs
	QED579	Facilitating Sexuality Education in Secondary Schools	2
	QED580	Understanding Social Behaviour of Secondary School Students	2
	QED581	Differentiating Instruction for Able Learners	2
	QED582	Teaching Students with Behavioural and Learning Problems	2
CURRICULUM STUDIES (Any two as assigned)			
	QCK	The Teaching of Accounting	9
	QCB	The Teaching of Biology	9
	QCY	The Teaching of Chemistry	9
	QCQ	The Teaching of Computer Applications	9
	QCE	The Teaching of English Language	9
	QCR	The Teaching of English Literature	9
	QCG	The Teaching of Geography	9
	QCH	The Teaching of History	9
	QCM	The Teaching of Lower Secondary Mathematics	9
	QCM	The Teaching of Mathematics	9
	QCP	The Teaching of Physics	9
	QCL	The Teaching of Social Studies	9
PRACTICUM			
	QPR520	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK520	Communication Skills for Teachers	2

Note: In addition to the core courses and required number of prescribed electives, student teachers are required to undertake a compulsory Group Endeavours in Service Learning (GESL) project – QGS511. Description on GESL projects is available in page 12.

Table 3 : Curriculum Structure of the PGDE (Chinese, Secondary) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED520	Educational Psychology I: Theories and Applications for Learning and Teaching	2
	QED521	Educational Psychology II: Providing for Individual Differences in Learning and Teaching and Classroom Management	2
	QED522	ICT for Engaged Learning	2
	QED523	The Social Context of Teaching and Learning	2
EDUCATION STUDIES (Select 1)			
	QED560	Computer Supported Collaborative Learning	2
	QED561	Technologies as Cognitive Tools	2
	QED562	Designing Effective Learning Environments	2
	QED563	Games and Simulations for Learning	2
	QED564	Designing for Communities of Practice	2
	QED565	Surviving and Thriving as a Beginning Teacher	2
	QED566	The Learning School: Innovation and Enterprise	2
	QED567	Creating Connections in the School Community	2
	QED568	Exploring Issues in Philosophy of Education	2
	QED569	Teachers as Leaders	2
	QED570	Multiculturalism in Singapore Schools	2
	QED571	Schooling in Meritocratic Societies	2
	QED572	Moral Education Across the Curriculum	2
	QED573	Psychology of Learning and Motivation	2
	QED574	Assessment and Alternative Assessment to Promote Thinking	2
	QED575	From Extrinsic Motivation to Passion: Diversified Approaches to Learning	2
	QED576	Developing Creativity in the Secondary Classroom	2
	QED577	Counseling and Guidance in Secondary Schools	2
	QED578	Youth At-Risk: From the Classroom to the Courtroom?	2
	QED579	Facilitating Sexuality Education in Secondary Schools	2
	QED580	Understanding Social Behaviour of Secondary School Students	2
	QED581	Differentiating Instruction for Able Learners	2
	QED582	Teaching Students with Behavioural and Learning Problems	2

Cont'd

Category/ Subject	Course Code	Title	No. of AUs
CURRICULUM STUDIES			
Chinese Language	QCC520	Teaching of Chinese Language 1	3
	QCC521	Teaching of Chinese Language 2	5
	QCC522	Teaching of Chinese Language 3	2
CURRICULUM STUDIES			
Chinese Literature	QCJ520	Teaching of Chinese Literature 1	2
	QCJ521	Teaching of Chinese Literature 2	4
	QCJ522	Teaching of Chinese Literature 3: IT and Project Work	2
PRACTICUM			
	QPR520	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK520	Communication Skills for Teachers	2
Use of Chinese In Teaching	QLC520	Use of Chinese in Teaching	2

Note: In addition to the core courses and required number of prescribed electives, student teachers are required to undertake a compulsory Group Endeavours in Service Learning (GESL) project – QGS511. Description on GESL projects is available in page 12.

CONTENTS OF CORE COURSES AND PRESCRIBED ELECTIVES

EDUCATION STUDIES

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QED520	Educational Psychology I: Theories and Applications for Learning and Teaching	Core	2	-
QED521	Educational Psychology II: Providing for Individual Differences in Learning and Teaching and Classroom Management	Core	2	-
QED522	ICT for Engaged Learning	Core	2	-
QED523	The Social Context of Teaching and Learning	Core	2	-
Choose one from the following Elective courses :				
QED560	Computer Supported Collaborative Learning	Prescribed	2	-
QED561	Technologies as Cognitive Tools	Prescribed	2	-
QED562	Designing Effective Learning Environments	Prescribed	2	-
QED563	Games and Simulations for Learning	Prescribed	2	-
QED564	Designing for Communities of Practice	Prescribed	2	-
QED565	Surviving and Thriving as a Beginning Teacher	Prescribed	2	-
QED566	The Learning School: Innovation and Enterprise	Prescribed	2	-
QED567	Creating Connections in the School Community	Prescribed	2	-
QED568	Exploring Issues in Philosophy of Education	Prescribed	2	-
QED569	Teachers as Leaders	Prescribed	2	-
QED570	Multiculturalism in Singapore Schools	Prescribed	2	-
QED571	Schooling in Meritocratic Societies	Prescribed	2	-
QED572	Moral Education Across the Curriculum	Prescribed	2	-
QED573	Psychology of Learning and Motivation	Prescribed	2	-
QED574	Assessment and Alternative Assessment to Promote Thinking	Prescribed	2	-
QED575	From Extrinsic Motivation to Passion: Diversified Approaches to Learning	Prescribed	2	-
QED576	Developing Creativity in the Secondary Classroom	Prescribed	2	-

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QED577	Counseling and Guidance in Secondary Schools	Prescribed	2	-
QED578	Youth At-Risk: From the Classroom to the Courtroom?	Prescribed	2	-
QED579	Facilitating Sexuality Education in Secondary Schools	Prescribed	2	-
QED580	Understanding Social Behaviour of Secondary School Students	Prescribed	2	-
QED581	Differentiating Instruction for Able Learners	Prescribed	2	-
QED582	Teaching Students with Behavioural and Learning Problems	Prescribed	2	-

QED520 Educational Psychology I: Theories and Applications for Learning and Teaching

This course provides the foundation for understanding the learner, their development and the psychology of learning. Key areas include: Understanding different aspects of pupil development and how these influence the teaching and learning processes. Psychosocial development, stages of moral development and the self-concept, and theories of intellectual development. Application of psychological principles and learning theories to classroom learning; understanding how pupils learn and how some pupils fail to learn; proactive approaches to motivate and enhance learning, develop creative and critical thinking and problem-solving skills.

QED521 Educational Psychology II: Providing for Individual Differences in Learning and Teaching and Classroom Management

Students with diverse abilities and needs are increasingly found in mainstream schools in Singapore. Greater diversity among students

requires pedagogical approaches that are inclusive of the learning needs of all and yet responsive to individual abilities. This course seeks to help student teachers understand the characteristics and needs of diverse learners and how to cater to their needs. This course also seeks to help student teachers acquire and apply basic knowledge and skills in relation to creating conducive learning environments, managing and facilitating teaching and learning activities, and school/classroom discipline. The importance of the practice of proactive classroom management and positive teacher-student relationship will also be emphasized.

QED522 ICT for Engaged Learning

Information and Communications Technologies (ICT) are an important part of classroom environments in Singapore today. In this course, student teachers learn the affordances of ICT tools for designing teaching and learning activities, design classroom activities for engaging students' with ICT as outlined in MOE's Second Masterplan for IT in Education. At the end of the course, student teachers need to demonstrate ICT integration in terms of planning, implementing & managing learning activities, work collaboratively to create ICT-based learning materials, and manage ICT learning activities.

QED523 The Social Context of Teaching and Learning

This course provides student teachers with an introduction to the Singapore education system that they will be working in. They will need to know the functions of the school system in socializing citizens

for economic, political and social roles in the context of a multi-ethnic and multicultural society. They will have the opportunity to understand the rationale of major education policies and new government initiatives that impact the work of school leaders, teachers, students and other stakeholders in order to achieve the Desired Outcomes of Education laid out by the Ministry of Education. At the same time, they will be made aware of the diverse and multiple roles that are played by teachers in the education system.

QED560 Computer Supported Collaborative Learning (CSCL)

CSCL advocates the move away from teacher-centred to student-centred approaches where individuals in the learning community make meaning collaboratively through innovative teaching practices. The Knowledge Building Community is a pedagogical model that exploits the affordances of CSCL technologies. In this course, student teachers will learn how to design thinking prompts to support intentional learning; facilitate social negotiation of ideas among students and structure the online environment to help students in organizing emergent understandings.

QED561 Technologies as Cognitive Tools

In this course, the participants will be introduced to concepts and research of cognitive tools. They will also be tasked to design lesson employing various forms of IT tools to engage students in higher order thinking. Some of the tools cover includes mindmapping software, computer-mediated communication and model building tools. The use of IT as cognitive tools allows technological affordances

to be exploited to enhance teaching and learning in the classrooms.

QED562 Designing Effective Learning Environments

This course explores key components of learning environments for 21st century teaching and learning contexts. The design of effective learning environments requires the interplay of key components such as pedagogy, social and technology anchored on the social-cultural setting. It brings about learner engagement in the form of experiential learning and discussions on perspectives and issues, making decisions, and contextualizing learner-environment landscapes. Building on the potential of some cutting edge technologies (e.g. web 2.0 and modeling and visualization technologies), the participants will be involved in the designing learning processes (planning, representing knowledge, communicating, collaborating, and reflecting) appropriate for the various subject-specific teaching and learning.

QED563 Games and Simulations for Learning

Games and simulations are quickly becoming significant cultural phenomena that can support powerful forms of learning. This course approaches games and simulations as interactive digital media that accomplish theoretical, pedagogical, and practical goals. Through writings, readings, and software analysis, the course explores games and simulations as cultural and social texts, as designed learning spaces, and as rule-based systems. We will also examine debates about how games and simulations function in classroom settings in order to better understand their value. Particular attention will

be paid to the role of educational games and simulations as resources for teaching with problem-based and inquiry-based scenarios.

QED564 Designing for Communities of Practice

This course capitalizes on communities of practice to situate learning in rich and meaningful contexts. It capitalizes on the concepts of situated learning, implicit and explicit knowledge and distributed cognition enabling holistic learning experiences. Because communities of practice is an increasingly important concept for enculturating a learning disposition in both teachers and students, strategies & issues for designing and fostering communities are introduced and discussed.

QED565 Surviving and Thriving as a Beginning Teacher

This course discusses the various challenges facing beginning teachers in Singapore secondary schools and junior colleges, and aims to better prepare them for their careers. Many teachers find the transition from their teacher preparation year to schools daunting because they often lack an adequate understanding of what lies ahead of them. This course will provide an opportunity for them to discuss and clarify their aspirations, expectations, fears and concerns; understand some of the key roles, responsibilities and challenges awaiting them in their relationships with other stakeholders in the school system; think about their career progression beyond the initial years. The main thrust in this course is on *personal* development and reflection as part of a growth process undertaken in collaboration with the course instructors and other course participants. In other words, there is no “one right

track” or “one-size-fits-all” philosophy underlying the course.

QED566 The Learning School: Innovation and Enterprise

There is a buzz on the scene: ‘Innovation and Enterprise’ (I&E). Launched in 2004, this initiative is set to bring Singapore schools to an era of experimentation and change. There are many implications for teaching and learning. There are also many implications for school leaders, teachers and students. This course explains how a learning school, where staff and students are actively engaged in learning, generates better learning outcomes and inculcates the I&E spirit. The course will be taught through lectures, group work, directed readings, peer teaching and reflection.

QED567 Creating Connections in the School Community

This course explores the concept of ‘social capital’ and how school professionals can leverage on it to build positive school-home-community links with other stakeholders. It examines research on the benefits of parental involvement in schooling and provides an authentic opportunity for basic research into local situations. Participants will gain valuable first-hand (and usually, first-time) experiences on how to conduct small-scale research into specific topics of interest. Foreign students in Singapore, financially-needy students, part-time work among students, smoking among teens, influence of the media on youth, are recent examples of work undertaken by participants in the course.

QED568 Exploring Issues in Philosophy of Education

This course explores philosophical issues in education through a select score of films. Topics include the concepts of education, teaching and learning, philosophical underpinnings for a meaningful classroom, and key policy concerns in education. This course encourages the student teachers to engage in philosophical inquiry – to reflect on their profession or vocation as teachers, question and establish their own assumptions, beliefs and values. Besides films, other innovative pedagogical tools and methods such as music videos, online lectures, online discussions, e-games, and peer teaching may be used to enhance the learning process.

QED569 Teachers as Leaders

The role of the teacher is becoming increasingly complex. The teacher today is expected to be a life-long learner, passionate in his or her commitment to education. In addition, he or she must also be able to motivate and inspire students, deal diplomatically with parents, negotiate with officials, and solicit the support of community and business leaders. The teacher, in other words, is expected to be a kind of leader. But what does it mean for a teacher to be a leader? In this course we will explore various conceptions of leadership and enquire about their relation to the roles and responsibilities of teachers. What are the knowledge, skills, and attitudes that a teacher would need to develop in order to become a leader in education? Throughout this course students will be encouraged to refer to lessons from other courses in the programme, especially *The Social Context of Teaching and Learning*.

QED570 Multiculturalism in Singapore Schools

Racial harmony and social cohesion have always been a major national goal in Singapore since independence. However, our understanding of racial harmony is more often than not superficial. In the current government's attempt at political, economic and social renewal, there is need for Singaporeans to make the transition from silent naïve tolerance to a deeper understanding of the different cultural traditions that make up Singapore society. But how do teachers promote racial harmony and social cohesion in the midst of heavy workload, changing curriculum, and an education system that emphasizes economic and academic pursuits? This course will provide student teachers with learning opportunities to appreciate issues relating to multi-ethnicity in the Singapore context, how these issues surface in school and classroom practices, and creative ways to promote multiculturalism in schools.

QED571 Schooling in Meritocratic Societies

Meritocracy is one of the “sacred cows” of Singapore's education system. But does this mean that all students experience schooling in the same way? This course explores the implications of such a system for different groups of students (male/female, different racial/ethnic groups; socio-economic status) and some of the challenges these issues might pose for teachers in Singapore. By drawing on teaching and learning experiences in Singapore, as well as other meritocratic systems across the world, participants will have an opportunity to consider different strategies that can be used to manage these challenges.

QED572 Moral Education Across the Curriculum

It has often been pointed out that every teacher is a moral educator. This course is an attempt to show why and how this saying is true. With help of actual examples, the course explores the various facets of a teacher's work in the classroom, school and community in order to show that all subject teachers teach knowledge which are needed for our students' complete understanding of their moral obligations within their specific life situations. They do this both within the curriculum and also at co-curricular activities. And beyond promoting the understanding of moral obligations, all teachers also have a role in training students in the commitment, strength of will and skills needed for effective practice no matter what subject they teach and what CCA they conduct.

QED573 Psychology of Learning and Motivation

The course examines learning and motivation theories in the context of student development and learning in variety of contexts – classroom and school activities as well as out-of-school environments. The role of the teacher as a motivator; motivating and demotivating factors affecting learning; and strategies for motivating different types of learners will be examined.

QED574 Assessment and Alternative Assessment to Promote Thinking

This course will discuss the concepts of assessment, measurement, evaluation and testing and the integral role that assessments play in the teaching and learning process. Formative and summative evaluation will be considered employing conventional

and alternative assessments to promote thinking. The different ways of assessing students' work, crafting assessment tasks and grading will be discussed together with consideration for the broader issues of validity, reliability and objectivity of the results. Problems, issues and research related to assessment will be discussed.

QED575 From Extrinsic Motivation to Passion: Diversified Approaches to Learning

Motivation comes from the Latin verb *movere* (to move). In lay person's term, the idea of motivation is to get us going, keeps us moving, and helps us complete tasks. Despite the commonly held idea, all educators know that getting students to move is no simple task, especially if we want them to move in a direction desired by us. This course will look at the 'what' and 'why' of motivation, and examine 'how' we can move students from external motivation to nurturing in them a passion for learning by the use of diversified approaches to learning such as multiple intelligences and problem-based learning.

QED576 Developing Creativity in the Secondary Classroom

The psychological principles of creativity development; essential concepts and techniques for promoting and assessing creative thinking in the classroom; the qualities of the creative product; procedures of the creative process; characteristics of the creative person; conditions of the creative environment; psychometric and consensual approaches to the assessment of creativity and individual differences in creativity.

QED577 Counseling and Guidance in Secondary Schools

This course introduces the basic concepts and applications concerning the use of individual counseling and group guidance in the school setting. It is designed for teachers as well as teacher-counsellors to learn basic individual counseling skills and basic group guidance skills for developmental, prevention, and intervention work. Simulated practice will be utilized throughout the course for skill acquisition and development.

QED578 Youth At-Risk: From the Classroom to the Courtroom?

This course provides student teachers with an in-depth understanding of the nature and causes of some of the more serious behavioural problems such as gang violence, suicidal tendencies, substance abuse and internet pornography, displayed by at-risk youths today. The course also serves to equip teachers with the appropriate strategies and preventive measures in handling some of these behavioural problems in the classroom before the adolescent faces incarceration in the courtroom. Intervention programmes offered by the Singapore Juvenile Court for handling such acts of deviance will also be discussed in the course.

QED579 Facilitating Sexuality Education in Secondary Schools

This course provides teachers with the content knowledge on human sexuality as well as pedagogic skills to deliver sexuality education to teenagers in secondary schools. Course participants will have the opportunity not only to update basic knowledge of

physiological changes and development in adolescents, but also an awareness of attitudes and emotional, cultural and moral issues. Topics such as gender roles, sexual health and behaviour, and intimate relationships as well as issues such as contraception, abortion, homosexuality and the influence of media and the Internet will be addressed.

QED580 Understanding Social Behaviour of Secondary School Students

This course will examine the theories and research on social behaviour. Participants will learn to use developmental guidance to enhance learning and social interaction in the classroom. Issues such as group theories and techniques in group guidance, leadership, decision making, conflict resolution, social influence, prosocial and help-seeking behaviour, friendships and close relationships, and group problem-solving will be examined.

QED581 Differentiating Instruction for Able Learners

The promise of an ability-driven curriculum and that all students will learn is mere rhetoric if teachers lack deep knowledge of learners and the pedagogical skills necessary to help learners of diverse abilities. There is a need to help teachers better understand the traits and needs of high-ability learners and to make needs-based curricular modifications and instructional decisions in mixed-ability settings. This course aims to help student teachers develop an overview of the conceptions of giftedness, understand the psychology and needs of the precocious student and develop appropriate, differentiated approaches to meet the learning needs of these students in mainstream classrooms.

QED582 Teaching Students with Behavioural and Learning Problems

This course prepares future secondary school teachers in managing a classroom comprising students with diverse academic, emotional and behavioural challenges. The course emphasizes preventive, supportive and corrective measures for developing and maintaining positive learning environments for all students. Topics covered include causal and risk factors for learning and behavioural problems, an overview of academic, behavioural and social/emotional characteristics of students who manifest specific learning and behavioural problems, preliminary screening, identification and assessment, effective academic instructional strategies, social skills instruction, individual and group strategies for managing behaviours, and collaboration with parents and other professionals.

CURRICULUM STUDIES

The Teaching of Accounting

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCK521	Assessment and Further Strategies in Teaching Principles of Accounts	Core	3	-
QCK522	Pedagogical Approaches to Teaching and Learning Accounting	Core	4	-
QCK523	Motivating Students to Learn Accounting	Core	2	-

QCK521 Assessment and Further Strategies in Teaching Principles of Accounts

Modes of assessment and examination requirements for Principles of Accounts at 'O' level and Principles of Accounting at 'A' level; test analysis and construction, diagnosis, feedback and remediation are covered in this course. Development of higher level skills in Accounting are honed through inquiry and guided discovery, problem-solving and case studies.

The A-Level part of this course introduces student teachers to the H2 syllabus for Principles of Accounting and provides resources and information in planning the scheme of work. The syllabus caters to a broader and more flexible curriculum with greater emphasis on higher order thinking skills, entrepreneurial pursuits, initiative and independent learning. In addition, student teachers are inspired to incorporate the MOE initiatives of Thinking Skills, NE, IT, I&E and TLLM into the curriculum.

In addition to a wide variety of instructional methods inquiry approaches to develop higher level skills in Accounting, e.g., guided discovery learning, simulation games, and problem-based learning, as well as the use of practice sets, case studies and

projects in Accounting will be covered. There will be opportunities for student teachers to have exposure in working with schools or other institutions on innovation and enterprise projects and also engage in reflective practice through Lesson Study.

QCK522 Pedagogical Approaches to Teaching and Learning Accounting

This course introduces student teachers to the rationale and structure of Principles of Accounts in the school curriculum. After having an overview of syllabus development and MOE initiatives, the course covers a variety of strategies and resources for teaching and learning of Principles of Accounts. These include cooperative learning, peer tutoring, mastery learning and practice sets. Theoretical underpinnings of certain best practices using frameworks like Dimensions of Learning, learning styles and brain-based learning in teaching express and normal course pupils will be shared. There will be opportunities for hands-on practice, role-play, group discussion & presentation, cooperative learning, peer evaluation & feedback in lesson planning and micro-teaching of selected topics in the Principles of Accounts syllabus, with peer feedback and self-reflection. Such experiential learning prepares student teachers for effective teaching and learning of Accounts. Classroom management is highlighted too. As thinking skills are inherent in the Accounting syllabuses, strategies to develop thinking skills as well as using IT to facilitate learning will be covered. Ample opportunities in harnessing IT for the teaching and learning of Principles of Accounts to enhance the effectiveness of the teaching-learning process will be provided. Emphasis is given to building a student-centred environment to enhance the teaching and learning of Accounts. A mixed

mode delivery approach is used to cater to the student teachers' needs and to expose them to a repertoire of strategies and methods for teaching and learning.

QCK523 Motivating Students to Learn Accounting

The mixed-mode delivery framework of motivating students in learning accounting is taken further in this course when student teachers are exposed to using games and game show as pedagogical tools, and organising events like an Accounting carnival to heighten the energy level and enthusiasm of students in learning Accounting.

Creating authentic environments for applying accounting into practice, a practice set that involves manual as well as computerised accounting will provide first-hand exposure to student teachers in organising extension of learning activities for students.

The Teaching of Biology

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCB520	Teaching of Biology I	Core	2	-
QCB521	Teaching of Biology II	Core	4	-
QCB522	Teaching of Biology III	Core	3	-

QCB520 Teaching of Biology I

The course consists of three parts.

Part 1 discusses some issues of the nature of science, and the use of history for teaching biology. It also introduces student teachers to biologists belonging to the minority groups.

Part 2 discusses alternative conceptions, difficulties and problems in various biology topics, and the use of concept maps for teaching biology.

Part 3 covers the various learning theories, styles and approaches, multiple intelligences theory, and the use of analogies and word juxtapoz for teaching biology.

QCB521 Teaching of Biology II

This course will examine the Biological Sciences curriculum in Singapore Schools and how to plan lessons for pupils of different ability ranges and levels in secondary schools. Basic teaching skills together with a variety of teaching/learning strategies, thinking/study skills and co-operative learning strategies will be discussed. The management and control of pupil behavior, safety practices in science. IT, its applications and resources for Biology teaching from the Internet, will be explored.

QCB522 Teaching of Biology III

Issues on the what and why of testing in science, test construction, marking of examination scripts, and its implications for teachers and teaching styles. Alternative assessment of practical skills, the setting of tasks for Science Practical skills assessment, the rubrics for teachers' practical assessment and marking of practical work. The role of resource centres for field trips, planning and conducting field trips to suitable resource centre/nature reserve and the presentation of a report on the suitability of the centre. Issues and safety measures in conducting Life Sciences experiments for students in secondary schools. Reflections on Practicum.

The Teaching of Chemistry

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCY520	The Teaching of Chemistry I	Core	4	-
QCY521	The Teaching of Chemistry II	Core	2	-
QCY522	The Teaching of Chemistry III	Core	3	-

QCY520 The Teaching of Chemistry I

Basic issues, concepts and principles in chemical education. Psychological principles crucial to the teaching and learning of chemistry. Issues related to the organisation and implementation of the science/chemistry curriculum. Multimedia learning in chemistry education. The planning and teaching strategies, and use of resources crucial for the effective teaching of chemistry that includes unit and lesson planning, the inquiry approach, constructivist approach, problem-solving, expository teaching, demonstrations, project and practical work.

QCY521 The Teaching of Chemistry II

Purposes of evaluation, tables of specifications, test construction, administration, marking, and analysis; interpretation of test scores. Alternative assessment modes such as open-book tests, take-home examinations, concept mapping, assessment of attitudes and values, and project work will be considered. The management, assessment and moderation of SPA (school-based practical assessment).

QCY522 The Teaching of Chemistry III

Micro-teaching provides opportunities to identify and practise basic teaching skills such as opening and closing a lesson, explaining concepts, questioning and responding to pupils. Student teachers practise the relevant skills through mini-presentations on selected chemistry topics at the secondary level. The presentations are reviewed and critiqued by peers and the tutor.

The Teaching of Chinese Language

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCC520	Teaching of Chinese Language 1	Core	3	-
QCC521	Teaching of Chinese Language 2	Core	5	-
QCC522	Teaching of Chinese Language 3	Core	2	-

QCC520 Teaching of Chinese Language 1

This course aims to provide student teachers with the basic theories and concepts related to language and language teaching at secondary level, with special reference to Chinese. Its objective is to enable student teachers to design their own lesson plans with confidence, embolden by sound theoretic knowledge.

QCC521 Teaching of Chinese Language 2

This course aims to equip student teachers with techniques in the teaching of different language skills. Student teachers will acquire a comprehensive understanding of the various teaching methods and various practical techniques. It also introduces student teachers to effective classroom teaching skills to enhance teaching of Chinese Language.

QCC522 Teaching of Chinese Language 3

This course aims to introduce student teachers to the basic concepts of Chinese language testing, the procedures of language testing, the effective ways of setting various types of questions and the cognitive levels involved. Its objective is to enable student teachers to design appropriate mode of assessments for the teaching of Chinese Language.

The Teaching of Chinese Literature

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCJ520	Teaching of Chinese Literature 1	Core	2	-
QCJ521	Teaching of Chinese Literature 2	Core	4	-
QCJ522	Teaching of Chinese Literature 3: IT and Project Work	Core	2	-

QCJ520 Teaching of Chinese Literature 1

This course introduces student teachers to the Chinese Literature syllabus for secondary and pre-university level in Singapore. It will also introduce student teachers to various literary appreciation and critical theories with special reference to the teaching of Chinese Literature. Its objective is to equip student teachers with the knowledge and skills in the teaching of Chinese literature.

QCJ521 Teaching of Chinese Literature 2

This course deals with the formal, stylistic and thematic features of various literary genres and the skills of teaching of different literary Chinese genres, both classical and modern. It also deals with the infusing of critical thinking skills in teaching Chinese Literature. Its objective is to equip student teachers with the skills of analyzing and teaching of literary texts, in relation to content and theme, structure and literary language.

QCJ522 Teaching of Chinese Literature 3: IT and Project Work

This course provides student teachers with the fundamental principles and knowledge for the use of IT in the learning and teaching of Chinese Language

and Chinese Literature. It equips student teachers with basic skills and approaches in searching, selecting and integrating of digital resources in the teaching of Chinese language and Chinese Literature. It also introduces to student teachers the aims and objectives as well as fundamental concepts and strategies in supervising group projects in secondary school.

The Teaching of Computer Applications

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCQ520	Topics in Computer Applications	Core	4	-
QCQ521	Computer Laboratories and Resources	Core	1	-
QCQ522	Assessment and Coursework	Core	2	-
QCQ523	Instructional Approaches to Computer Applications	Core	2	-

QCQ520 Topics in Computer Applications

The various topics in the syllabus with reference to key concepts and developments of subject topics including computer basics, word processing, desktop publishing, spreadsheets, database management, computer graphics, multimedia presentation and computers in everyday life. Activities and instructional materials relevant to each area. The opportunity to practise teaching skills. Tutor and fellow student teachers give feedback and suggestions on various aspects of teaching competencies for reflection and further practice.

QCQ521 Computer Laboratories and Resources

Computer facilities including hardware and software, computer systems and installation, computer laboratory, microcomputers, networks, peripherals, costing; sources of information about computing and computer education including resource centres, publications, instructional packages.

QCQ522 Assessment and Coursework

The design, construction and analysis of tests, examinations and coursework; assessment for diagnosis and remediation; requirements and

standard of performance expected of pupils in preparation for examinations.

QCQ523 Instructional Approaches to Computer Applications

The computer applications syllabus as prescribed in the Normal (Technical) course and the planning of lessons. Aims of computer education for schools, the rationale and objectives of the syllabus, conceptual framework, organisation and sequencing, nature and principles of computing, lesson plan and preparation. The various instructional approaches appropriate for the teaching of computing, such as exposition, investigation, discussion, problem solving, hands-on activities and cooperative groupwork. The opportunity to practise teaching skills. Discussions on how emerging technologies can be used in the teaching process.

The Teaching of English Language

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCE520	Language Teaching Approaches	Core	6	-
QCE521	Language Teaching Experience	Core	3	-

QCE520 Language Teaching Approaches

This course introduces learner teachers to the theory and practice of teaching grammar, oral communication, reading and writing to secondary school students. Using the *English Language Syllabus 2001* as a point of departure, it aims to help learner teachers explore a range of strategies and skills for developing language proficiency in students, and develop lesson outlines for teaching grammar and the language skills in integrated ways. Learner teachers will become familiar with the theoretical perspectives, approaches and principles that underpin language teaching and learning. They will also develop an ability to select, adapt, and use a variety of resources for language teaching and modes of assessment of learning. By encouraging a critical, integrated and balanced view of theory and practice, this course aims to develop informed, reflective and effective beginning teachers of English Language at the secondary school level.

QCE521 Language Teaching Experience

This course aims to help learner teachers cultivate an ability to make stronger links between theory and practice in language teaching. The course is designed to provide an opportunity for learner teachers to put into practice the understandings and skills they have acquired from QCE520. Learner teachers will collaboratively design a unit of integrated lessons for secondary school students.

Their tutors will guide them through the processes of planning a unit of work using principles of curriculum planning as well as skills, strategies and approaches acquired from QCE520. This course also provides opportunities for learner teachers to reflect on and share their teaching experiences. The central theme running through the course is Engaging our Learners, which is a principal thrust of the next phase of education (MOE Work Plan Seminar 2005).

The Teaching of English Literature

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCR520	Aims and Approaches to Teaching Literature	Core	6	-
QCR523	Literature Assessment, Writing and Teacher Reflection	Core	3	-

QCR520 Aims and Approaches to Teaching Literature

This course deals with the aims and objectives of teaching Literature in the local context. The main focus will be practical competence in teaching the major literary forms—poetry, prose fiction, and drama, and practice in lesson planning and literature teaching skills.

QCR523 Literature Assessment, Writing and Teacher Reflection

This course examines the principles and practice of Literature assessment with a view towards setting appropriate Literature tests and exams. Opportunities for marking essay scripts according to the syllabus band descriptors will be provided. Of the range of assessment items considered, strategies and tasks for the development of writing skills in relation to Literature will be a primary focus. This course will conclude with a component on helping student teachers develop self-reflexive habits through reflection and evaluation after their practicum experience. Problems, teaching strengths, and weaknesses arising from Practicum will be addressed.

The Teaching of Geography

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCG520	Classroom and Field Approaches to the Teaching and Assessment of Geography	Core	6	-
#QCG521	Teaching Social Studies to Secondary School Students	Core	3	-

Note: # For those offering CS Geography and another CS other than History

QCG520 Classroom and Field Approaches to the Teaching and Assessment of Geography

This course introduces student teachers to a variety of teaching methods applicable to pupils of differing academic abilities in classroom situations and field settings. As a subject, geography permits the use of a large variety of instructional resources. As such, the course will integrate the use of a range of resources to enhance teaching and learning.

The course also provides opportunities to try out teaching methods through simulated teaching. Student teachers will be given opportunities to plan, teach and critique a lesson in geography under simulated conditions.

Student teachers will also be introduced to the fundamentals of assessment in geography. A variety of assessment methods will be discussed. Student teachers will be given opportunities to critique set examination papers and mark schemes, and to mark sample answer scripts.

QCG521 Teaching Social Studies to Secondary School Students

This course aims to provide student teachers with an understanding of the nature, scope and goals of social studies education in Singapore. The course will provide opportunities for student teachers to reflect on issues related to the secondary social studies syllabus content, and acquire an understanding of these issues. It also seeks to equip student teachers with a variety of classroom-based teaching strategies that are appropriate for the teaching of concepts, content, skills and values to differentiated learners in the social studies classroom. Student teachers will be exposed to these strategies through experiential learning. The tutorials will also provide opportunities for student teachers to reflect on critical issues in social studies teaching, discuss and practise some of teaching strategies, and design and develop unit and lesson plans in a cooperative learning environment. Student teachers will have opportunities to set source-based questions and structured-essay questions, devise the marking schemes and mark answer scripts.

The Teaching of History

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCH520	Teaching and Learning of Secondary History and Social Studies Through Field Trips	Core	2	-
QCH521	Teaching and Learning of Secondary History and Social Studies	Core	4	-
QCH522	Assessment and Evaluation in Secondary History and Social Studies	Core	2	-
QCH523	Reflection on the Teaching and Learning of Secondary History and Social Studies	Core	1	-

QCH520 Teaching and Learning of Secondary History and Social Studies through Field Trips

This course seeks to expose student teachers to an interesting and challenging strategy in the teaching of History and Social Studies by taking student teachers out of the classroom. It will focus on how fieldtrips can be used to make the subjects come alive for pupils. Student teachers will be trained to plan, organise and conduct fieldtrips to selected sites in Singapore. They will not only discover valuable nuggets of information about these sites, but will also learn how to organise activities that will enhance pupils' awareness of their culture and heritage.

QCH521 Teaching and Learning of Secondary History and Social Studies

The course gives an insight to student teachers about the nature and purpose of History and Social Studies. The teaching of History and Social Studies in secondary schools is now in an exciting phase of change. Critical thinking, ICT and use of sources are changing the way History and Social Studies are being taught. This course is designed to equip student teachers with various strategies such as

cooperative learning, the use of role-play, integrating sources in lessons and the use of information communication technology.

QCH522 Assessment and Evaluation in Secondary History and Social Studies

This course enables student teachers to conduct assessment in History and Social Studies. To meet the objectives and examination requirements of the new syllabus, emphasis is given to the use of source materials. It examines how primary and secondary sources can be used in constructing document-based items. The course gives student teachers practice in setting source based and structured essay questions, devising marking schemes and marking answer scripts. It also introduces student teachers to formative assessments.

QCH523 Reflection on the Teaching and Learning of Secondary History and Social Studies

This course gives student teachers the opportunity to link theory with practice. It emphasizes the importance of reflection in teaching. Student teachers will be given the opportunity to share their reflection on a particular lesson that they have been tasked to teach in the school they have been posted to. They will also reflect on their Practicum.

The Teaching of Mathematics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCM520	Teaching and Learning Mathematics I (All Sec)	Core	6	-
QCM521	Teaching and Learning Mathematics II (All Sec)	Core	3	-

QCM520 Teaching and Learning Mathematics I (All Sec)

The main objective of this course is to equip student teachers with a working knowledge of basic teaching principles; an understanding of the theories of learning that inform instruction and a comprehensive knowledge of the curriculum. The content of this course includes: aims and objectives of mathematics education; mathematics curriculum in Singapore; learning theories in mathematics; lesson planning; role of ICT in mathematics education; teaching of mathematics topics - Arithmetic, Algebra, Functions and Graphs, Mensuration, Geometry, Trigonometry, Statistics, Probability, Sets, Matrices, Vectors, Higher Algebra and Calculus.

QCM521 Teaching and Learning Mathematics II (All Sec)

Microteaching; assessment, test construction and marking; reflection on practice. Topics for microteaching and test construction will be taken from the Secondary Mathematics Syllabus.

The Teaching of Lower Secondary Mathematics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCM530	Teaching and Learning Mathematics I (Lower Sec)	Core	6	-
QCM531	Teaching and Learning Mathematics II (Lower Sec)	Core	3	-

QCM530 Teaching and Learning Mathematics I (Lower Sec)

The main objective of this course is to equip student teachers with a working knowledge of basic teaching principles; an understanding of the theories of learning that inform instruction and a comprehensive knowledge of the curriculum. The content of this course includes: aims and objectives of mathematics education; mathematics curriculum in Singapore; learning theories in mathematics; lesson planning; role of ICT in mathematics education; teaching of mathematics topics - Arithmetic, Algebra, Functions and Graphs, Mensuration, Geometry, Trigonometry, Statistics, Probability, and Sets.

QCM531 Teaching and Learning Mathematics II (Lower Sec)

Microteaching; assessment, test construction and marking; reflection on practice. Topics for microteaching and test construction will be taken from the Lower Secondary Mathematics Syllabus.

The Teaching of Physics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCP520	Teaching of Physics I	Core	2	-
QCP521	Teaching of Physics II	Core	4	-
QCP522	Teaching of Physics III	Core	3	-

QCP520 Teaching of Physics I

The course attempts to provide student teachers in initial teacher education programmes with an understanding of school pupils they will be taking charge of. To improve their teaching efforts, they will be exposed to individual differences in learning, diagnosis, and strategies to deal with different ability groups as represented in the Gifted, Express, Normal (Academic) and Normal (Technical) Streams. Special effort will be devoted to helping the student teacher deal with critical incidents. Lectures on showmanship, creativity, thinking skills, inquiry, telling and explaining will be included as the key elements in support of good teaching.

QCP521 Teaching of Physics II

This course will introduce student teachers to physics curriculum development with respect to international and local trends. The infusion of thinking, the meaningful integration of ICT and the linkage to national education, innovation and enterprise spirit will be given due attention and focus. An understanding of the constructivist-inquiry approach, investigative problem-solving, meaningful demonstration and purposeful deductive inquiry will facilitate the teaching and learning of physics. This course will also address alternative conceptions of student teachers on various physics topics. Activities based on the physics curriculum and involving

experiences that are hands-on, minds-on and experiential will be introduced to model how conceptual development and change can be facilitated.

QCP522 Teaching of Physics III

This course covers important areas of Physics teaching pertaining to assessment and evaluation issues. It also deals with resource management, particularly with reference to laboratory work in the context of SPA. Safety in science laboratories, the role of practical work and the enhancement of science process skills are discussed. The setting of physics tests, marking and analyzing of test papers are covered with an emphasis on how to give useful feedback to students, parents and other stakeholders.

The Teaching of Social Studies

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCL520	Teaching Social Studies to Secondary Students	Core	4	-
QCL521	Use of Sources in the Secondary Social Studies Classroom	Core	2	-
QCL522	Assessment and Reflective Teaching in Social Studies	Core	3	-

QCL520 Teaching Social Studies to Secondary Students

This course aims to provide student teachers with an understanding of the nature, scope and goals of social studies in the context of the school curriculum and the nature of Singapore's growth as a society. Opportunities to reflect critically on issues related to the syllabuses content as well as to the teaching of the subject in schools will be provided. Student teachers will try out a variety of teaching strategies through practice-based sessions, and design and develop unit and lesson plans in a cooperative learning environment.

QCL521 Use of Sources in the Secondary Social Studies Classroom

An important aim of Social Studies is to develop thinking and process skills which are essential for lifelong and independent learning. This course will not only expose student teachers to a variety of ways to use sources in the lower secondary normal technical and upper secondary social studies classrooms, but also provide opportunities for student teachers to select appropriate sources, and design creative teaching strategies that incorporate the use of sources.

QCL522 Assessment and Reflective Teaching in Social Studies

This course focuses on assessment and will include a variety of methods and strategies that are appropriate for the assessment of learning outcomes in social studies. Student teachers will set source-based questions and structured-essay questions, devise the mark schemes and mark answer scripts. The course will also provide opportunities for student teachers to reflect on not only the quality of their students' work but also their own work.

PRACTICUM

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QPR520	Teaching Practice	Core	10	-

QPR520 Teaching Practice

The Practicum is a very important component of the PGDE programme. Its principal function is to provide student teachers with the opportunity to develop teaching competencies in a variety of instructional contexts and at different levels, under the guidance and supervision of cooperating teachers and university lecturers. They will learn from experienced cooperating teachers about the schooling process and prepare themselves for their roles and responsibilities in teaching.

During the Practicum, student teachers will be able to use the knowledge and skills acquired in the subjects they read at the university, and have opportunities to integrate theory and practice in schools.

The Practicum will comprise a 10-week Teaching Practice (TP), in which the student teachers will build up their skills and knowledge in a step-wise manner. They will develop planning and delivery skills, followed by classroom management and evaluation skills. In addition, to ensure that the student teachers have a holistic experience, they will also be provided opportunities to explore other aspects of a teacher's life besides classroom teaching, for example, observing how CCAs are managed.

LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS

Communication Skills for Teachers

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QLK520	Communication Skills for Teachers	Core	2	-

QLK520 Communication Skills for Teachers

This is a practical course designed to provide student teachers with the oral and written skills necessary for effective communication as teachers in the classroom and for their professional interaction with colleagues, parents and the general public.

There are three main areas of study in the course: Voice and Pronunciation; Oral and Written Communication; and the Use of Oral Language in Classroom Interaction. Under Voice and Pronunciation, student teachers learn about vocal health care and quality, and the practice of good voice production. They are familiarized with the use of a pronunciation dictionary to help them resolve pronunciation and word stress difficulties. Under Oral and Written Communication, student teachers become aware of the importance of considering the purpose, audience and situation when communicating. They also engage in practical hands-on activities of making oral and written presentations in a variety of school contexts. Under the Use of Oral Language in Classroom Interaction, student teachers learn about the various roles that teachers take on in classroom interaction, and how to communicate effectively to promote student learning. They also gain an understanding of how to use language to create a conducive environment for students with different abilities; to support student learning; to

manage students; to give oral feedback; and to encourage students to think.

Built into the tutorials are opportunities for student teachers to reflect on their practices as well as on-going assignments and oral and written presentations to assess their application of the knowledge and skills that they acquire during the course.

Use of Chinese in Teaching

Course Code	Title	Course Category	No. of Aus	Pre-requisites
QLC520	Use of Chinese in Teaching	Core	2	-

QLC520 Use of Chinese in Teaching

This course aims to equip student teachers with the essential knowledge and communication skills on the use of Chinese in teaching.