

POSTGRADUATE DIPLOMA IN EDUCATION
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ENQUIRIES

For enquiries on admission to initial teacher preparation (ITP) programmes offered by NIE, please email to:

nieadmtp@nie.edu.sg

You may wish to visit the following NIE homepage for information on the ITP programmes:

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

Because of the large number of candidates seeking admission, we regret that no telephone or personal enquiries will be entertained.

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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 2011 provides for some degree of specialisation in secondary school teaching.

This PGDE programme is administered by the Office of Teacher Education 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 school subjects, 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 2011 Intake)	O : 04 Jan 2011 – 07 Jan 2011 S1: 10 Jan 2011 – 27 May 2011 V : 28 May 2011 – 26 Jun 2011 S2: 27 Jun 2011 – 25 Nov 2011 R : 03 Sep 2011 – 11 Sep 2011	- - 21 Nov 2011 – 25 Nov 2011 (Compulsory Enrichment Programme)	Nil 27 Jun 2011 – 02 Sep 2011 (10 weeks of Teaching Practice)

- * If NTU recess falls within the Practicum period, that programme will follow the school's one-week break
 + Orientation includes Registration of Courses
 ** Practicum starts during vacation period

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/careers/teach/>

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 or, in the case of a candidate specialising in Physical Education, more than three 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.

- 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

- 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)

- 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 service-learning community engagement project which all student teachers will complete. Student teachers work in groups of about 20 on a service-learning project they craft together with a partner organization or organizations. Service and learning objectives are determined before the group starts on their project. Each group has a staff facilitator who mentors and guides the group, and eventually assesses the group on their project. GESL seeks to empower student teachers with the skills of conducting service-learning projects while getting in touch with the community around us. It is hoped that through the experience of conducting a service-learning project, each student teacher would have practiced, among other things, project management skills, teamwork, needs analysis, decision-making, empathy, and learnt more about the community around us.

English Language Content Enhancement (ELCE)

All student teachers in the PGDE (General, Primary) programme taking English Language as their Curriculum Studies (CS) (with effect from the July 2010 Intake) as well as student teachers taking English Language as their CS in the PGDE Secondary programme are required by the Ministry of Education to complete a series of three English Language Content Enhancement courses. Student teachers in the PGDE Junior College programme who read English Language will be required to take the first two ELCE courses but will be exempted from the third.

Spread over the PGDE programme as well as their first year of teaching, the ELCE courses are designed to benefit student teachers in two ways: to equip them with the content knowledge for teaching English confidently, and to enable them to

understand the processes involved in developing, as well as enacting, an English Language curriculum.

The Meranti Project

The Meranti Project is a MOE-funded personal and professional development programme specially tailored for student teachers. With the aid of informal dialogue with both veteran teachers and school students, it gives student teachers the opportunity to listen to firsthand experiences of teachers and the perspectives of student learners. Through experiential learning pedagogies, the programme helps student teachers experience the core competencies of social emotional learning, to share their personal aspirations with their peers and to express their opinions in an open and creative environment. At the end of the programme, student teachers will have a better grasp of the innovative approaches to National Education and be better equipped when they begin their teaching journey upon graduation.

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	38	38
	Teaching of CL at Secondary Level	1	40	40

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 helping student teachers improve their 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
	QED523	The Social Context of Teaching and Learning	2
	QED524	Educational Psychology II: Teaching and Managing Diverse Learners in the Classroom	2
	QED527	ICT for Meaningful Learning	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
	QBS	The Teaching of Elements of Business Skills	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 11.

- * Student teachers assigned English Language as their Curriculum Studies (CS) are required to undertake English Language Content Enhancement (ELCE) courses. Description of ELCE is available in page 11.

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
	QED523	The Social Context of Teaching and Learning	2
	QED524	Educational Psychology II: Teaching and Managing Diverse Learners in the Classroom	2
	QED527	ICT for Meaningful Learning	2
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 11.

CONTENTS OF COURSES

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	-
QED523	The Social Context of Teaching and Learning	Core	2	-
QED524	Educational Psychology II: Teaching and Managing Diverse Learners in the Classroom	Core	2	-
QED527	ICT for Meaningful Learning	Core	2	-

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

This course provides the foundation for understanding learners, learner development, and the psychology of learning. The ways in which these aspects influence the processes of learning will be considered, and proactive approaches to enhancing student motivation, learning, and thinking explored. Theories with a focus on students' psychosocial and cognitive development will be introduced and its implications for classroom-practice considered. In particular, the course will consider areas such as why and how some students learn or fail to learn, and how students' intellectual, social, emotional, personal and moral development occurs.

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.

QED524 Educational Psychology II: Teaching and Managing Diverse Learners in the Classroom

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 and development 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 is designed to help student teachers develop their personal pedagogy, 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.

QED527 ICT for Meaningful Learning

This course prepares student teachers to engage learners in meaningful learning by using ICT-mediated activities. Student teachers will learn to analyse the affordances of ICT tools for various pedagogical applications, including ICT-mediated collaborative and self-directed learning, which are the goals for the ICT Masterplan 3. Student teachers will also analyse critical issues related to ICT-mediated instruction, such as managing an ICT-based classroom and cyberwellness. Student teachers will be assessed for their skills and knowledge in designing meaningful ICT-mediated teaching and learning activities.

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 juxtaposition 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 and cooperative 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, student portfolio, writing rubrics, 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 learning of various topics in Computer Applications (CPA) in the Secondary Normal (Technical) syllabus with reference to key concepts and developments in the subject including document processing, spreadsheets, computer graphics, multimedia presentations and digital animation. The hands-on creation of classroom activities and teaching/learning materials relevant to each area of CPA subject content will be covered. Student teachers will have opportunities to discuss various aspects of teaching/learning competencies for the purpose of reflection for further improvement.

QCQ521 Computer Laboratories and Resources

The awareness of 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. In addition, there will be opportunities to learn how to identify hardware/software issues; how to rectify these issues (troubleshooting) and how to prevent them.

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. The coursework component will also be covered hands-on, to experientially construct the final product(s) expected of pupils.

QCQ523 Instructional Approaches to Computer Applications

An introduction to the major learning theories, strategies and learning styles, with reference to the various instructional approaches appropriate for the teaching of Computer Applications (CPA). Topics such as effective classroom management, exposition, investigative and questioning approach, authentic learning, hands-on activities and problem solving will be discussed and explored. Issues such as the use of emerging technologies to enhance the learning process of CPA will be covered. There will be opportunities to practise the lesson planning process and to participate in critique of these lesson plans in CPA.

The Teaching of Elements of Business Skills

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QBS520	Pedagogical Approaches to Teaching and Learning Elements of Business Skills	Core	3	-
QBS521	Assessment and Further Strategies in Teaching Elements of Business Skills	Core	4	-
QBS522	Motivating Students to Learn Elements of Business Skills	Core	2	-

QBS520 Pedagogical Approaches to Teaching and Learning Elements of Business Skills

This course introduces student teachers to the rationale and structure of Business Skills in the school curriculum. Student teachers are exposed to a variety of strategies and resources for teaching and learning of EBS through experiential learning. Theoretical underpinnings of certain best practices using frameworks like Dimensions of Learning, learning styles and brain-based learning in teaching normal course pupils will be shared. There will be opportunities for hands-on practice, role-play, group simulation games, cooperative learning, peer evaluation & feedback in lesson planning and micro-teaching of selected topics in the EBS syllabus, and also for engaging in reflective practice. Such experiential learning prepares student teachers for effective teaching and learning of EBS. Differentiated instruction and classroom management are discussed too. Ample opportunities in harnessing IT and embedding alternative assessments in the teaching and learning of EBS 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 EBS. A mixed mode delivery pedagogical

framework is used to cater to the student teachers' needs and to expose them to a repertoire of strategies and methods for teaching and learning in an outcomes-focused, technology rich environment. Very useful pedagogical tools and strategies which are particularly relevant to teaching customer service, marketing and business activities in the service industry through the use of video vignettes, case studies and learning journeys, where authentic real-life scenarios are discussed will also be covered.

QBS521 Assessment and Further Strategies in Teaching Elements of Business Skills

There are two parts to this course: (a) Modes of assessment and examination requirements for EBS, which includes discussion of assessment issues related to the examiners' expectations and the crafting of examination questions and marking schemes. (b) Further instructional approaches which will extend discussion to the development of learning communities, inquiry and the use of IT. The focus will be on strategies and techniques that are specially catered to enhance teaching and learning to the less academically inclined pupils by leveraging on IT.

QBS522 Motivating Students to Learn Elements of Business Skills

This course dovetails into the earlier courses and it engages student teachers in experiential learning. This includes the implementation of the enrichment activities to excite students in the learning of EBS by providing them with experiential learning through enrichment activities. Other than using games and game show, student teachers will be exposed to organising events and field-trips for facilitating learning

of the subject. Exposure to the use of video vignettes and simulation games as useful pedagogical tools will also be covered.

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	-

Note: Student teachers offering the Teaching of English Language are required to undertake English Language Content Enhancement (ELCE) courses. Description of ELCE is available in Page 11.

QCE520 Language Teaching Approaches

This course introduces student teachers to the theory and practice of teaching grammar, oral communication, reading and writing to secondary school students. 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 is designed to provide an opportunity for student teachers to put into practice the understandings and skills they have acquired from QCE520. Student 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 in order to prepare student teachers for the new English Language Syllabus 2010. This course also provides opportunities for student teachers to reflect on and share their teaching experiences.

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 explores the aims and objectives as well as the challenges of teaching the Literature curriculum in Singapore schools. Informed by key theories concerning the teaching of English Literature, the main focus will be upon the acquisition of a range of practical strategies and skills for teaching the major literary forms—poetry, prose fiction, and drama—as well as practice in lesson planning. The course aims to develop pedagogically sound and effective literature teachers capable of devising their own teaching materials, instructing their students in literary analysis, and cultivating in them a love for the subject. Student teachers will find many opportunities for individual and collaborative work in this course.

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

incorporate 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
QCG523	Developing Understanding in Teaching and Learning Geography	Core	6	-
QCG524	Teaching and Learning Geography outside the classroom	Core	2	-
QCG525	Assessment in Geography	Core	1	-

QCG523 Developing Understanding in Teaching and Learning Geography

The course aims to guide student teachers to understand what it means to be an effective geography teacher. The course will allow student teachers to see, understand, and appreciate the web of relationships between people, places and environments through the exploration of key geographical concepts. They will learn pedagogical approaches which are interwoven into the subject matter. Student teachers will be given opportunities to design, teach and critique the geography curriculum.

QCG524 Teaching and Learning Geography outside the classroom

Field studies are an integral part of the teaching and learning geography. This course provides student teachers with the theoretical understanding of field studies. They will be given opportunities to design, conduct and critique a field-based learning activity.

QCG525 Assessment in Geography

Classroom assessment and practices have the potential to measure and provide feedback on learning as well as to ensure the understanding of geography. Student teachers will explore both the formative and summative aspects of assessing the learning of geography.

The Teaching of History

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCH524	Teaching of Secondary History through Field Trips	Core	2	-
QCH525	Teaching and Learning of Secondary History	Core	4	-
QCH526	Assessment and Evaluation in Secondary History	Core	2	-
QCH527	Reflection in the Teaching and Learning of Secondary History	Core	1	-

QCH524 Teaching of Secondary History through Field Trips

This course seeks to expose student-teachers to an interesting and challenging strategy in the teaching of History by taking student-teachers out of the classroom. It will focus on how field trips can be used to make the subject come alive for students. Student-teachers will be trained to plan, organise and conduct field trips 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 students' awareness of their culture and heritage.

QCH525 Teaching and Learning of Secondary History

The course gives an insight to student-teachers about the nature and purpose of teaching secondary school History. The teaching of History in secondary schools is now in an exciting phase of change. Creative thinking, ICT and use of sources are changing the way the subject is being taught in schools. This course is designed to equip student-teachers with various strategies such as cooperative learning, the use of role-play, the integration of

sources in lessons and the use of information communication technology, as part of teaching through historical enquiry.

QCH526 Assessment and Evaluation in Secondary History

This course enables student-teachers to conduct assessment and evaluation in History. 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 as an alternative method to assess and evaluate students' learning.

QCH527 Reflection in the Teaching and Learning of Secondary History

This course gives the opportunity for student-teachers to link theory with practice. It emphasises the importance of reflection in teaching. Student-teachers will be given the opportunity to share their reflections on a particular lesson that they have been tasked to teach in the schools they have been posted to. They will also reflect on relevant aspects of their school practicum experiences.

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 and physics from social, cultural and pedagogical perspectives. To improve their teaching practice, they will explore individual differences in learning, possible factors affecting students' understanding of physics, and strategies to support different ability groups as represented in the Gifted, Express, Normal (Academic) and Normal (Technical) Streams. Special effort will be made to help student teachers understand the nature of science, different pedagogical approaches for teaching physics, and elements of good physics teaching such as classroom interaction, creativity, thinking skills, inquiry, and explaining.

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 explores important areas of Physics teaching pertaining to assessment and evaluation issues. It covers setting, marking and analysis of test papers, formative assessment strategies, and alternative forms of assessment for the purpose of providing useful feedback to students, parents and other stakeholders. It also deals with the role of practical work in developing process skills and the assessment of laboratory skills, particularly in the context of SPA. Resource management and safety in science laboratories will also be discussed.

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 writing skills necessary for effective communication as teachers in the classroom and in their professional interaction with colleagues, parents and the general public. Student teachers learn about vocal health care and quality, and the practice of good voice production. Pronunciation and word stress issues are also highlighted in the course. They are familiarized with the use of a pronunciation dictionary and online resources to help them resolve pronunciation and word stress difficulties. They become aware of the importance of considering the purpose, audience and context when communicating and learn how to communicate effectively to promote student learning. They also engage in practical hands-on activities of making oral and written presentations in a variety of school contexts. 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.