August 2015

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.

For information on the NIE programmes that MOE offers to its sponsored candidates, please refer to the MOE website:

http://www.moe.gov.sg/careers/teach/

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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 programme provides for specialisation in primary, secondary and junior college teaching. The Physical Education (PE) specialisation is taught in a two-year full-time programme. The other specialisations are taught in one-year full-time programmes.

This PGDE programme is administered by the Office of Teacher Education which is committed to nurturing tomorrow's educators.

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 in primary schools, secondary schools or junior colleges;

(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 primary, secondary and junior college education. Student teachers in the PGDE programme are further sub-divided into two categories: "General" and "Language Specialisation".   For the PGDE (Primary) programme, there are two additional categories: "Art Specialisation" and "Music Specialisation".

The PGDE (PE) programme is of two academic years' duration. It leads to the award of the Postgraduate Diploma in Education with specialisation in Physical Education at the Primary or Secondary level.

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:

Academic Year 2015-2016

Programme	Dates of Orientation (O+) / Teaching Weeks (TW) / Recess (R) / Vacation (V)	Dates of Revision / Examination / Compulsory Events	Dates of Practicum
PGDE (Pri/Sec/JC) (Jul 2015 Intake)	**Semester 1** O : 27 July 2015 – 31 July 2015 TW: 03 Aug 2015 – 04 Dec 2015 V : 05 Dec 2015 – 10 Jan 2016 **Semester 2** TW: 11 Jan 2016 – 10 Jun 2016 R : 12 Mar 2016 – 20 Mar 2016	- - 30 May 2016 – 10 June 2016 (Beginning Teachers' Orientation Programme is compulsory)	NIL 22 February – 06 May 2016* (10 weeks of Teaching Practice)
PGDE (PE) Year 1 (Jul 2015 Intake)	**Semester 1** O : 27 July 2015 – 31 July 2015 TW: 03 Aug 2015 – 04 Dec 2015 V : 05 Dec 2015 – 10 Jan 2016 **Semester 2** TW: 11 Jan 2016 – 06 May 2016 R : 27 Feb 2016 – 06 Mar 2016 V : 07 May 2016 – 31 Jul 2016**	- -	NIL 27 June – 29 July 2016 (5 weeks of Teaching Practice 1 during the vacation before Year 2)
PGDE (PE) Year 2 (Jul 2014 Intake)	**Semester 1** TW: 03 Aug 2015 – 04 Dec 2015 V : 05 Dec 2015 – 10 Jan 2016 **Semester 2** TW: 11 Jan 2016 – 10 Jun 2016 R : 12 Mar 2016 – 20 Mar 2016	- 30 May 2016 – 10 June 2016 (Beginning Teachers' Orientation Programme is compulsory)	NIL 22 February – 06 May 2016* (10 weeks of Teaching Practice)
PGDE (PE) Year 2 (Jan 2014 Intake)	**Semester 1** TW: 12 Jan 2015– 29 May 2015 V : 30 May 2015 – 28 Jun 2015 **Semester 2** TW: 29 Jun 2015 – 04 Dec 2015 R : 05 Sep 2015 - 13 Sep 2015	- 23 Nov 2015 – 04 Dec 2015 (Beginning Teachers' Orientation Programme is compulsory	NIL 29 June – 04 September 2015* (10 weeks of Teaching Practice 2)
PGDELT	**Semester 1** O : 30 Jul 2015 – 07 Aug 2015 TW: 10 Aug 2015 – 04 Dec 2015 R : 26 Sep 2015 – 04 Oct 2015 V : 05 Dec 2015 – 10 Jan 2016 **Semester 2** TW: 11 Jan 2016 – 06 May 2016 R : 27 Feb 2016 – 06 Mar 2016	- -	NIL NIL

*   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 under the employment of the Ministry, and will be provided sponsorship by the Ministry. Successful applicants are first deployed to schools for the untrained teaching stint. This stint allows schools to assess the untrained teachers' suitability for teaching, and untrained teachers to affirm their interest in teaching. Admission to NIE, which is in August each year, is subject to the school's recommendation and the courses and vacancies available in NIE at that point in time. Successful applicants will have to abide by the 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. Visit the website to find out more about the various application periods.

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 www.nie.edu.sg/teacher-ed/admissions. Applications normally open from mid-January to mid-March.

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.

Other special requirements include the following:

- GCE 'O' Level passes in English, Mathematics and any Science Subject for teaching general subjects at primary school level;

- an interest and ability in Physical Education and sports as well as pass a Physical Proficiency Test to teach Physical Education;

- a five-minute audition for applicants shortlisted to teach Music. The audition will include at least one of the following: performance of prepared pieces on first and/or second instruments; sight reading on first instrument; sight singing; harmonising a simple melody on piano; or improvising a simple piece.

- an art-focused interview for applicants shortlisted to teach Art.

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.

1   Grade and grade points are assigned as follows:

Letter-Grade	Grade Point	Academic Unit (AU)
A+	5.00	
A	5.00	
A-	4.50	
B+	4.00	
B	3.50	
B-	3.00	AU is earned
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	-	Absent (with valid reason)
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:

[Grade Point x AU for course 1] + [Grade Point x AU for course X] + ……
[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.

Classification of Student Teachers

Student teachers specialising in the Teaching of Physical Education are classified as Year 1 and Year 2 student teachers according to the number of academic units earned as shown below:

Programme	Number of Academic Units Earned	
	Year 1	Year 2
PGDE (PE)	0 – 26	27 and above

English Language Content Enhancement (ELCE)

All student teachers in the PGDE (Primary)(General) 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 personal and professional development programme specially tailored for student teachers. The programme is experiential in nature where student teachers experience the core competencies of social emotional learning, share their personal aspirations with their peers and express their opinions about their chosen career in an open and supportive environment. Through informal dialogue with veteran teachers and school students, The Meranti Project gives student teachers the opportunity of learning firsthand from teachers' experiences and student learners' perspectives.

At the end of the programme, student teachers will develop better self-awareness, a clearer idea of what Character and Citizenship Education (CCE) entails and one's role in nurturing CCE in innovative ways. It also aims to develop better ideas of working with diversity in the classroom, strategies for coping

with being a teacher, and an affirmation of choosing teaching as a career.

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. These activities form an integral part of the programme.

Academic Integrity

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 their programme of study. Student teachers should not plagiarize or pass off as their 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.

Please refer to the NIE Academic Integrity Framework available on the NIE Portal for more details.

Academic Structure of Programme

Structure of PGDE Programme

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

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)

Student teachers in the PGDE (Physical Education)(Primary) and PGDE (Physical Education)(Secondary) programmes are required to offer a fifth component of Academic Subject.

Student teachers in the PGDE (Junior College) (General) programme are required to offer a fifth component of Knowledge Skills.

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 primary, secondary school or junior college level. These are designed to give student teachers the pedagogical skills in teaching specific subjects in Singapore schools.

PGDE (Primary)

Student teachers in the Three Curriculum Studies Track will offer three Curriculum Studies areas while the student teachers in the Two Curriculum Studies Track will offer two Curriculum Studies areas.

The following are PGDE (Primary) (General) Curriculum Studies subjects:

> The Teaching of English Language
> The Teaching of Mathematics
> The Teaching of Social Studies
> The Teaching of Science

Those specialising in **Teaching Chinese, Malay or Tamil Language at the Primary level** have the following Curriculum Studies subjects:

> CS1: The Teaching of Chinese/Malay/Tamil Language
> CS2: The Teaching of Moral Education
> (Chinese/Malay/Tamil)

Those specialising in **Teaching of Art or Music at the Primary level** have only Art or Music as a Curriculum Studies subject.

PGDE (Primary) Physical Education student teachers who are specialising in **Teaching of Physical Education** will take Curriculum Studies in Physical Education as their CS1

throughout the two-year programme. They will also have to take another Curriculum Studies subject as their CS2.

PGDE (Secondary)

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

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

CS1: The Teaching of Chinese/Malay/Tamil Language
CS2: The Teaching of Chinese/Malay/Tamil
       Literature

PGDE (Junior College)

PGDE (Junior College) student teachers will specialise in the methodology for teaching one subject at Junior College level and one subject at secondary school level. The Junior College teaching subject must be aligned to the Secondary teaching subject, with the exception of Economics and General Paper.

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.

Academic Subject

Student teachers who specialise in the Teaching of Physical Education will be required to read one Academic Subject which will be Physical Education.

Subject Knowledge

Student teachers in PGDE (Primary) (Art) and PGDE (Primary) (General) (Two CS Track) are required to read subject knowledge courses aligned to their Curriculum Studies areas. These courses help to strengthen and reinforce the subject knowledge of student teachers for primary school teaching.

Knowledge Skills

Student teachers in the PGDE (Junior College) (General) programme are required to read a Knowledge Skills course that helps to develop the values, knowledge and skills expected of Junior College teachers.

PGDE Programme
Teaching at Primary Level

Curriculum Structure

The curriculum structures for various strands of the PGDE (Primary) programme are shown in Tables 1, 2, 3 and 4 below:

Table 1: Curriculum Structure of the PGDE (Primary) (General) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED001	Professional Practice and Inquiry I	0
	QED002	Professional Practice and Inquiry II	1
	QED506	Teaching and Managing Learners at the Primary Level	2
	QED507	ICT for Meaningful Learning	2
	QED509	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED510	The Social Context of Teaching and Learning	1
	QED511	Character and Citizenship Education	1
	QED512	Assessing Learning and Performance	1
	QED513	Group Endeavours in Service Learning	1
CURRICULUM STUDIES (Three Curriculum Studies Track)			
Select 3 Curriculum Studies areas			
English Language *	QCE501	Teaching Reading and Writing	6
	QCE502	Teaching Oral Communication	2
Mathematics	QCM501	Teaching and Learning of Primary Mathematics I	6
	QCM502	Teaching and Learning of Primary Mathematics II	2
Science	QCS501	Curriculum and Pedagogy for Primary Science	3
	QCS502	Assessment Modes and Resource Management in Primary Science	3
	QCS503	Innovations in Design and Practices for Primary Science	2
Social Studies	QCL501	Teaching Social Studies in the Primary Classroom I	4
	QCL502	Teaching Social Studies in the Primary Classroom II	2
	QCL503	Managing Diversity in the Social Studies Classroom	2

cont'd

Category/ Subject	Course Code	Title	No. of AUs
CURRICULUM STUDIES (Two Curriculum Studies Track)			
Select 2 Curriculum Studies areas			
English Language *	QCE50A	Teaching Reading and Writing	6
	QCE50B	Teaching Oral Communication in the Primary School	3
Mathematics	QCM50A	The Teaching and Learning of Primary Mathematics I	6
	QCM50B	The Teaching and Learning of Primary Mathematics II	3
Science	QCS50A	Curriculum and Practices for Primary Science	3
	QCS50B	Assessment in Primary Science	3
	QCS50C	Pedagogies for Primary Science	3
Social Studies	QCL50A	Teaching Social Studies in the Primary Classroom	4
	QCL50B	Managing Diversity in the Primary Social Studies Classroom	2
	QCL50C	Inquiry in Primary Social Studies	3
SUBJECT KNOWLEDGE (Two Curriculum Studies Track)			
(Select 2 Subject Knowledge areas aligned with the Curriculum Studies subjects)			
English Language	QSE50A	Grammar	2
	QSE50B	Children's Literature	2
Mathematics	QSM50A	Number Topics	2
	QSM50B	Geometry Topics	2
Science	QSS50A	Topics in Physical Science for Primary Science Teaching	2
	QSS50B	Topics in Biological Science for Primary Science Teaching	2
Social Studies	QSL50A	Disciplinary Foundations in Primary Social Studies: Geography	2
	QSL50B	Disciplinary Foundations in Primary Social Studies: History	2
PRACTICUM			
	QPR500	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK501	Communication Skills for Teachers	2

Note: *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 on Page 13.

Table 2: Curriculum Structure of the PGDE (Primary) (Chinese/Malay/Tamil) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED001	Professional Practice and Inquiry I	0
	QED002	Professional Practice and Inquiry II	1
	QED506	Teaching and Managing Learners at the Primary Level	2
	QED507	ICT for Meaningful Learning	2
	QED509	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED510	The Social Context of Teaching and Learning	1
	QED511	Character and Citizenship Education	1
	QED512	Assessing Learning and Performance	1
	QED513	Group Endeavours in Service Learning	1
CURRICULUM STUDIES (Select either Chinese, Malay or Tamil)			
Chinese			
Chinese Language	QCC501	Teaching of Chinese Language 1	4
	QCC502	Teaching of Chinese Language 2	1
	QCC503	Teaching of Chinese Language 3	5
	QCC504	Teaching of Chinese Language 4	2
Moral Education (Chinese)	QCZ501	Teaching of Civics and Moral Education 1 (Chinese)	3
	QCZ502	Teaching of Civics and Moral Education 2 (Chinese)	3
Malay			
Malay Language	QCD501	Teaching of Malay Language (Pri) 1	3
	QCD502	Teaching of Malay Language (Pri) 2	3
	QCD503	Teaching of Malay Language (Pri) 3	3
	QCD504	Teaching of Malay Language (Pri) 4	3
Moral Education (Malay)	QCZ503	Teaching of Civics and Moral Education 1 (Malay)	3
	QCZ504	Teaching of Civics and Moral Education 2 (Malay)	3
Tamil			
Tamil Language	QCT501	Teaching of Tamil Language I	4
	QCT502	Teaching of Tamil Language II	2
	QCT503	Teaching of Tamil Language III	3
	QCT504	Teaching of Tamil Language IV	3
Moral Education (Tamil)	QCZ505	Teaching of Civics and Moral Education I (Tamil)	3
	QCZ506	Teaching of Civics and Moral Education II (Tamil)	3

cont'd

PRACTICUM			
	QPR500	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK501	Communication Skills for Teachers	2
Select the same language as in Curriculum Studies	QLC501	Use of Chinese in Teaching	2
	QLM501	Use of Malay in Teaching I	1
	QLM502	Use of Malay in Teaching II	1
	QLT501	Use of Tamil in Teaching I	1
	QLT502	Use of Tamil in Teaching II	1

Table 3: Curriculum Structure of the PGDE (Primary) (Art) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED001	Professional Practice and Inquiry I	0
	QED002	Professional Practice and Inquiry II	1
	QED506	Teaching and Managing Learners at the Primary Level	2
	QED507	ICT for Meaningful Learning	2
	QED509	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED510	The Social Context of Teaching and Learning	1
	QED511	Character and Citizenship Education	1
	QED512	Assessing Learning and Performance	1
	QED513	Group Endeavours in Service Learning	1
CURRICULUM STUDIES			
	QCA506	Artistic Development of Children and Adolescents	3
	QCA507	Methods and Materials: Appropriating Artistic Techniques and Material Usage within the Primary School	2
	QCA508	Concepts and Practices in Art Education	2
	QCA509	Curriculum Development and Assessment	3
	QCA510	Visual Arts Education in Museums and Galleries	2
SUBJECT KNOWLEDGE			
	QSA501	Two Dimensional Exploration	2
	QSA502	Three Dimensional Exploration	2
	QSA503	New Media Exploration	2
	QSA504	Visual Literacy	2
PRACTICUM			
	QPR500	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK501	Communication Skills for Teachers	2

Table 4: Curriculum Structure of the PGDE (Primary) (Music) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED001	Professional Practice and Inquiry I	0
	QED002	Professional Practice and Inquiry II	1
	QED506	Teaching and Managing Learners at the Primary Level	2
	QED507	ICT for Meaningful Learning	2
	QED509	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED510	The Social Context of Teaching and Learning	1
	QED511	Character and Citizenship Education	1
	QED512	Assessing Learning and Performance	1
	QED513	Group Endeavours in Service Learning	1
CURRICULUM STUDIES			
	QCI504	Skills 1 Music Theory for a Multi-Cultural Music Curriculum	3
	QCI505	Skills 2 Playing and Conducting	3
	QCI506	Skills 3 ICT and Music Education	3
	QCI507	Curriculum I – Theory and Practice of Music Education I	3
	QCI508	Curriculum II – Theory and Practice of Music Education II	3
	QCI509	Repertoire Studies I	3
	QCI510	Repertoire Studies II	2
PRACTICUM			
	QPR500	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK501	Communication Skills for Teachers	2

Contents of Core Courses

Education Studies

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QED001	Professional Practice and Inquiry I	Core	0	-
QED002	Professional Practice and Inquiry II	Core	1	-
QED506	Teaching and Managing Learners at the Primary Level	Core	2	-
QED507	ICT for Meaningful Learning	Core	2	-
QED509	Educational Psychology: Theories and Applications for Learning and Teaching	Core	1	-
QED510	The Social Context of Teaching and Learning	Core	1	-
QED511	Character and Citizenship Education	Core	1	-
QED512	Assessing Learning and Performance	Core	1	-
QED513	Group Endeavours in Service Learning	Core	1	-

QED001 Professional Practice and Inquiry I

This course provides the foundation for student teachers to understand the process of integrating and aggregating their learning, be reflective and establish the theory-practice connection to their practice. In particular, this course will provide avenues for student teachers to (i) explore and reflect on their beliefs as teachers, (ii) understand the process of inquiring into their teaching and (iii) articulate their growing understanding of what constitutes a 21st century educator pivoted on NIE's value-based V^{3}SK framework.

QED002 Professional Practice and Inquiry II

This course builds on Professional Practice and Inquiry I. Embedded within the PPI course in the use of an e-Portfolio to facilitate student teachers' construction of their conceptual framework of learning and teaching. This course aids the aggregation and integration of student teachers' learning from the various courses in NIE to prepare them for their teaching practice. During teaching practice, the e-Portfolio facilitates student teachers' inquiry into their own practice with a focus on the Theory-Practice Nexus. In addition, student teachers articulate their growing understanding of what constitutes good teaching in relation to NIE's Graduand Teacher Competencies (GTC).

QED506 Teaching and Managing Learners at the Primary Level

Mainstream primary schools in Singapore attend to pupils of various needs and abilities across their different stages of development. This requires relevant classroom management skills and pedagogical approaches to effectively meet their learning and development needs.

This course aims to equip student teachers with relevant knowledge and skills in managing learning and behaviour of pupils in order to create a safe, inclusive and productive classroom environment. The theory-practice link to strengthen competencies of student teachers with respect to classroom management challenges will be emphasized. Student teachers will also be provided with opportunities to reflect on their personal philosophy for classroom

management.

QED507 ICT for Meaningful Learning

This course prepares student teachers to engage learners in meaningful learning with the use of ICT. Student teachers will learn how to analyse the affordances of ICT for promoting dimensions of meaningful learning, i.e. learning by doing, engaging students' prior knowledge, using real world contexts, collaborative learning and self-directed learning Student teachers will also analyse critical issues related to designing technology-enabled lessons, such as integration of appropriate instructional strategies and cyberwellness issues. Student teachers will be assessed for their skills and knowledge in designing meaningful ICT-enabled teaching and learning activities.

QED509 Educational Psychology: Theories and Application 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 and personal development occurs.

QED510 The Social Context of Teaching and Learning

This course aims to promote deeper understanding about the socio-political development of the Singapore education system among pre-service teachers at the National Institute of Education. They will appreciate the functions of the education 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. It is hoped that pre-service teachers will become aware of the challenges that teachers face when engaging in pedagogical developments and initiatives in schools, and be empowered to become innovative, effective and caring teachers. Pre-service teachers are encouraged to link the content learnt in this course to what they have learnt in other courses at NIE, as they discuss major challenges and issues in the Singapore education system.

QED511 Character and Citizenship Education

This course helps pre-service teachers to understand the key concepts and issues in Character and Citizenship Education (CCE) and get a good grasp of their roles in CCE in school. As schools play a nurturing role in the development of students,

teachers have the responsibility to be aware of their professional commitments with regard to CCE: What roles do teachers play in the character development of students? What are the relevant attitudes, knowledge and skills that teachers should possess to enable them to contribute meaningfully to the character development of their students in schools? How should teachers introduce students to the notions of citizenship through citizenship education?

Hence, the CCE course will allow pre-service teachers in NIE to learn about character development, elements of citizenship, key approaches and pedagogies for CCE, as well as current MOE CCE policy and curriculum. Furthermore, the course will emphasize the relevant knowledge and skills teachers will need in order to deliver the CCE curriculum. Pre-service teachers will learn about the policies associated with CCE and be given opportunities to discuss the implementation of CCE in their future roles as teachers.

QED512 Assessing Learning and Performance

This course provides participants with the ability to understand and apply the basic principles of educational assessment. The course will discuss the principles of educational measurement of learning. It aims to equip future teachers with the necessary knowledge and skills to monitor, appraise and evaluate learners' content knowledge, progress and performance achievement. This course will cover traditional paper and pencil testing methods and performance-based, authentic assessment procedures. The course will also include discussions on using assessment for learning.

QED513 Group Endeavours in Service Learning (GESL)

Group Endeavours in Service Learning (GESL) is a service-learning community engagement project which is mandatory for all student teachers. Student teachers work in groups of about 20 on a service-learning project that they craft together in partnership with an/several organization(s). GESL provides the opportunity for groups to broaden their knowledge and understanding of underserved communities. Service and learning objectives are determined before the group commence on their project. Each group has a staff mentor who mentors, guides, and eventually assesses the group on their project. GESL seeks to empower student teachers through a hands-on approach of finding out the needs of the community and serving them. It is hoped that through the experience of conducting a service-learning project, each student teacher would develop social-emotional learning competencies, project management skills, teamwork, needs analysis, decision-making, and empathy towards the communities around us.

Curriculum Studies

The Teaching of Art [For PGDE (Primary)(Art)]

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCA506	Artistic Development of Children and Adolescents	Core	3	-
QCA507	Methods and Materials: Appropriating Artistic Techniques and Material Usage within the Primary School	Core	2	-
QCA508	Concepts and Practices in Art Education	Core	2	-
QCA509	Curriculum Development and Assessment	Core	3	-
QCA510	Visual Arts Education in Museums and Galleries	Core	2	-

QCA506 Artistic Development of Children and Adolescents

This course will consist of introductions to classical and contemporary theories of children and adolescents' development in the visual arts. This course will help student teachers understand the various theoretical frameworks and how these underpin particular approaches to pedagogy and classroom practice. Student teachers will be aware of the values and philosophies that underpin the art curriculum in schools and will also learn how to design art experiences that will promote and encourage intellectual and emotional development. Student teachers will also gain an in-depth understanding of the centrality of meaningful art engagements to the development of the whole child – specifically in the areas of artistic, aesthetic maturation, and creative growth.

QCA507 **Methods and Materials: Appropriating Artistic Techniques and Material Usage within the Primary School Context**

This course is designed to amalgamate studio and artistic practices of student teachers with pedagogical approaches. In this course, student teachers will learn to translate studio techniques and material usage to suit the primary teaching setting and will design lesson packages that are developmentally and pedagogically appropriate. Student teachers will learn about theories surrounding concept-based pedagogy and design lessons that incorporate multiple visual art forms (ie. 2D, 3D, New Media). In addition, student teachers will also have the opportunity to sample best practices in the field as well as pilot their own lessons design and pedagogical approaches.

QCA508 **Concepts and Practices in Art Education**

The course will look into how the teaching of art has evolved over history. Issues that arise from the various education philosophies and theories and their curriculum implications in art education will be discussed. The course will also examine how government policies and initiatives in the arts influence the teaching of art in local schools.

QCA509 Curriculum Development and Assessment

Student teachers will be introduced to the various theories on curriculum and evaluation in art education. Student teachers will be exposed to various curriculum models and evaluative instruments (prescriptive and naturalistic) currently in practice locally as well as internationally. In addition, student teachers will also learn how to work across subject disciplines and integrate the visual art curriculum meaningfully and insightfully. In essence, student teachers will develop competencies in designing art curriculum and programmes for primary schools while at the same time, be critical in examining and reflecting upon the various models and theories that they are adopting.

QCA510 Visual Arts Education in Museums and Galleries

This course will explore the educational role of museums and galleries and its relationship to art education. The primary aim is to help student teachers conceptualise and develop innovative gallery-based resources for different levels of schooling. Fieldtrips will be conducted to the various local museums and galleries.

The Teaching of Chinese Language

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCC501	Teaching of Chinese Language 1	Core	4	-
QCC502	Teaching of Chinese Language 2	Core	1	-
QCC503	Teaching of Chinese Language 3	Core	5	-
QCC504	Teaching of Chinese Language 4	Core	2	-

QCC501 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 primary 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.

QCC502 Teaching of Chinese Language 2

This course focuses on the teaching of the written forms of words.

QCC503 Teaching of Chinese Language 3

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.

QCC504 Teaching of Chinese Language 4

Student teachers will be introduced to 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.

The Teaching of Civics and Moral Education (Chinese)

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCZ501	Teaching of Civics and Moral Education 1 (Chinese)	Core	3	-
QCZ502	Teaching of Civics and Moral Education 2 (Chinese)	Core	3	-

QCZ501 Teaching of Civics and Moral Education 1 (Chinese)

The historical background of moral education in Singapore schools. An overview of the primary school Civics and Moral Education programme. The selection of relevant materials for the teaching of moral education. The various approaches to the teaching of moral education. Hands-on experience and the preparation of teaching plans.

QCZ502 Teaching of Civics and Moral Education 2 (Chinese)

The course deals with IT resources and children's literature as well as their use in the teaching of civics and moral education, in arousing pupils' interest and stimulating thinking.

The Teaching of English Language

3 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCE501	Teaching Reading and Writing	Core	6	-
QCE502	Teaching Oral Communication	Core	2	-

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCE50A	Teaching Reading and Writing	Core	6	-
QCE50B	Teaching Oral Communication in the Primary School	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 on Page 13.

QCE501 Teaching Reading and Writing

This course will equip student teachers with the knowledge of processes and strategies in the teaching of reading and writing at the primary level. Student teachers will learn the invaluable link between home / community and school for meaningful language learning, and how oracy, reading and writing can be integrated and taught in the lower and upper primary classrooms. Vocabulary and grammar will be taught in the context of reading and writing. In addition, student teachers will learn a variety of tools to monitor pupils' language skills for the purpose of improving teaching and learning.

QCE502 Teaching Oral Communication

This course will focus on processes and strategies for teaching oral communication skills in English. Student teachers will learn strategies and appropriate activities to help develop speakers and listeners in the primary classroom. They will become familiar with the learning outcomes for teaching oral communication skills in the Primary English Syllabus.

QCE50A Teaching Reading and Writing

This course will equip Student Teachers (STs) with the knowledge of processes and strategies in the teaching of reading and writing at the primary level. STs will learn the invaluable link between home / community and school for meaningful language learning, and how oracy, reading and writing can be integrated and taught in the lower and upper primary classrooms. Vocabulary and grammar will be taught in the context of reading and writing. In addition, STs will learn a variety of tools to monitor pupils' language skills for the purpose of improving teaching and learning.

QCE50B Teaching Oral Communication in the Primary School

This course will focus on theories and processes for teaching oral communication skills in English. Student teachers will learn strategies and appropriate activities to help develop speakers and listeners in the upper primary classroom. They will become familiar with the learning outcomes for teaching oral communication skills in the Primary English Syllabus.

The Teaching of Malay Language

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCD501	Teaching of Malay Language (Primary) 1	Core	3	-
QCD502	Teaching of Malay Language (Primary) 2	Core	3	-
QCD503	Teaching of Malay Language (Primary) 3	Core	3	-
QCD504	Teaching of Malay Language (Primary) 4	Core	3	-

QCD501 Teaching of Malay Language (Primary) 1

The theoretical and practical understanding of the Malay Language curriculum in primary schools. Theories and approaches in language learning. Various language teaching and learning methods and techniques. The process of vocabulary acquisition and development, including teaching of Malay proverbs. The use of IT-based materials in the teaching of Malay language.

QCD502 Teaching of Malay Language (Primary) 2

Reading process, the concept of reading "readiness" and the development of reading skills. Methods and strategies in the teaching of reading and reading comprehension including the use of big books and electronic 'shared' books in Malay. Reading activities and programmes at the primary level. Course topics include selected techniques for teaching listening, speaking skill.

QCD503 Teaching of Malay Language (Primary) 3

The role and functions of literature in children's development and language education. Exploring and appreciation of Children's literature and other literary materials and sources for development of four language skills. The general principles, methods and techniques in teaching literature.

QCD504 Teaching of Malay Language (Primary) 4

Understanding of the writing process, the various types of writing, the levels of writing skills and the teaching of evaluation of writing skills. Teaching and learning of Malay grammar at primary level. Basic concepts of testing, the construction and administration of tests, developing language tests and alternative assessments in Malay.

The Teaching of Civics and Moral Education (Malay)

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCZ503	Teaching of Civics and Moral Education 1 (Malay)	Core	3	-
QCZ504	Teaching of Civics and Moral Education 2 (Malay)	Core	3	-

QCZ503 Teaching of Civics and Moral Education 1 (Malay)

An introduction to the study of moral education. The aims of moral education and various approaches to the teaching of moral education such as the cultural transmission approach, consideration approach, cognitive developmental approach, values clarification approach and others. An overview of the primary school Moral Education programme. The aims and objectives, the approaches, techniques, strategies and preparation of teaching plans for the teaching of Moral Education.

QCZ504 Teaching of Civics and Moral Education 2 (Malay)

The concepts, core values in Moral Education and the shared values across different cultures, ethnics and religions in the context of Singapore as a plural society. Hands-on experience and the preparation of specific lessons. The use of IT in the teaching of Moral Education.

The Teaching of Mathematics

3 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCM501	The Teaching and Learning of Primary Mathematics I	Core	6	-
QCM502	The Teaching and Learning of Primary Mathematics II	Core	2	-

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCM50A	The Teaching and Learning of Primary Mathematics I	Core	6	-
QCM50B	The Teaching and Learning of Primary Mathematics II	Core	3	-

QCM501 The Teaching and Learning of Primary Mathematics I

Overview of the Singapore Primary Mathematics Curriculum; NE infusion; Preparation of Scheme of Work and Lesson Plans; Pedagogical Strategies and Psychological Theories; Teaching Problem Solving and Investigations; Mathematical Communication; Teaching of Whole Numbers, Fractions, Decimals, Percentages, Ratio and Direct Proportion, Rate and Speed, Geometry, Money and Measures, Mensuration, Graphical Representation and Statistics, Algebra. [ICT, use of calculators and common pupils' errors will be dealt with in the teaching of various topics.]

QCM502 The Teaching and Learning of Primary Mathematics II

This course covers two broad areas: (a) Various traditional assessment modes in Mathematics and the use of these modes in schools to assess pupil performance, in particular, the planning and construction of test items and (b) Practice of teaching skills, including catering for pupils of mixed abilities.

QCM50A The Teaching and Learning of Primary Mathematics I

This course covers general teaching principles and the teaching of specific topics for primary mathematics. It includes the following:
- The Singapore Primary Mathematics Curriculum
- Preparation of Scheme of Work and Lesson Plan
- Pedagogical Strategies and Psychological Theories
- Teaching Problem Solving
- Teaching of topics in all the content strands: Number and Algebra, Measurement and Geometry, and Statistics

Mathematical Processes, Use of ICT and Calculators as well as pupils' Learning Difficulties and Common Errors will be dealt with in the teaching of the various topics.

QCM50B The Teaching and Learning of Primary Mathematics II

This course covers assessment, micro-teaching and reflective practice. It includes the following:

- Various traditional assessment modes in Mathematics and the use of these modes in schools to assess pupil performance, in particular, the planning and construction of test items for written tests
- Practice of teaching skills, including catering for pupils of mixed abilities
- Alternative assessment modes in Mathematics and the use of these modes in primary schools for holistic assessment of pupils
- Reflective practice in mathematics teaching to strengthen theory-practice nexus.

The Teaching of Music [For PGDE (Primary)(Music)]

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCI504	Skills 1 Music Theory for a Multi-Cultural Music Curriculum	Core	3	-
QCI505	Skills 2 Playing and Conducting	Core	3	-
QCI506	Skills 3 ICT and Music Education	Core	3	-
QCI507	Curriculum I – Theory and Practice of Music Education I	Core	3	-
QCI508	Curriculum II – Theory and Practice of Music Education II	Core	3	-
QCI509	Repertoire Studies I	Core	3	-
QCI510	Repertoire Studies II	Core	2	-

QCI504   Skills 1 - Music Theory for a Multi-Cultural Music Curriculum

This course aims to develop some essential theoretical understanding to help teachers deal with the music-technical features—in respect of melody, harmony, rhythm, dynamics, timbre and texture (where applicable)—of different music traditions. This basic understanding is meant to undergird the designing of meaningful performing and creating lesson activities within a multi-cultural music curriculum. Whilst western art music theory forms the basis of theoretical understandings here, other traditions (e.g. Chinese, Indian, Indonesian and Malay as well as popular musics) will be brought in selectively for comparative study purposes with the aim of sensitizing teachers to pertinent commonalities and differences across traditions. The mode of teaching adopted will have a strong practical dimension whereby theoretical concepts are learnt in part through singing and performing in ways authentic to the tradition involved.

QCI505   Skills 2 - Playing and Conducting

This course is closely linked to QCI504 with a greater emphasis and focus on the development of practical instrumental and conducting skills useful to the classroom teacher. Teachers will be given an introduction to each of the instruments and will choose to develop skills in TWO of the following areas:
- singing
- recorder
- guitar
- keyboard
- classroom percussion
- conducting.

QCI506   Skills 3 - ICT and Music Education

An introduction to ICT learning for the music classroom. Internet resources including Web-based resources like Web 2.0/3.0, You Tube, etc. Software resources for teachers and pupils for the classroom. Introduction to popular music software used in schools including Acid-Pro, Cakewalk, Cubase, Sequel, Garage Band Finale, Sibelius. Integrating ICT into the General Music Classroom.

QCI507   Curriculum I – Theory and Practice of Music Education I

This course involves:
- Learning to listen with emphasis on rationales, advocacy and essential basic theory of music teaching and learning – including the

educational theories of Dalcroze, Orff, Kodaly, Gordon and Swanwick
- Developing basic music skills in the young child
- Rationale, theory and praxis of composing and improvising in the classroom. Selection of repertoire for music lessons – including world music in education and the music of popular culture
- Singing in the primary classroom – rationale, theory and practice
- Integrating world music into the General Music Classroom.

QCI508   Curriculum II – Theory and Practice of Music Education II

This course involves:
- The General Music Programme Syllabus in Singapore schools
- Musical opportunities and current educational initiatives (World music, music of popular cultures, creativity, ICT)
- Music as part of a general arts education
- Sourcing resources and appropriate materials for classroom use
- Planning and assessment in music education
- The role of the CCA – links with classroom music
- The wider musical world – music opportunities beyond the school: concert visits, private lessons, community music activities, visiting artists, practical musical activities in school outside the classroom, school musicals, broadening horizons among other possibilities.

QCI509   Repertoire Studies I

This course offers teachers an introduction to the music of the world and the varied role of music in differing societies. The lessons from these varieties of culture and societies are contextualized for the classroom by modelling ways in which these world music may be introduced to pupils in a practical and musical way. This course is designed as a starting point from which it is expected teachers will develop their own interests further. This course emphasizes the facilitation of an informed 'audience listening' with an emphasis on practical engagement (performing, composing, improvising) with the music wherever possible.

- World Music – with greater emphasis on local and regional music cultures
- Popular Music

QCI510   Repertoire Studies II

This course offers teachers an introduction to the music of the Euro-American tradition and music for film.
This course is designed as a starting point from which it is expected teachers will develop their own interests further. This course emphasizes the facilitation of an informed 'audience listening' with an emphasis on practical engagement (performing, composing, improvising) with the music wherever possible.

- Euro-American Art Musics
- Music for film and theatre

The Teaching of Science

3 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCS501	Curriculum and Pedagogy for Primary Science	Core	3	-
QCS502	Assessment Modes and Resource Management in Primary Science	Core	3	-
QCS503	Innovations in Design and Practices for Primary Science	Core	2	-

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCS50A	Curriculum and Practices for Primary Science	Core	3	-
QCS50B	Assessment in Primary Science	Core	3	-
QCS50C	Pedagogies for Primary Science	Core	3	-

QCS501 Curriculum and Pedagogy for Primary Science

The nature of science and scientific inquiry for young children will be the central guiding principles for learning in this course. Beginning teachers will gain an overview of the goals/objectives of the primary science curriculum from the analyses of syllabuses, textbooks, and other curricular materials with respect to present educational initiatives in Singapore. Drawing on contemporary learning theories and research findings, various methods and strategies in primary science will be taught through lectures and practical work.

QCS502 Assessment Modes and Resource Management in Primary Science

The course examines the underlying concepts and rationales in primary science assessment. Formal/non-formal methods of assessment as well as the construction and analyses of tests and practical work will be taught.

QCS503 Innovations in Design and Practices for Primary Science

This course will introduce student teachers to innovative ways of teaching and learning science both within and outside the classroom through collaborative activities. Student teachers will also have the opportunity to be involved in designing investigative problem-solving projects and enrichment programmes. Learners will also critically review and reflect on their teaching experiences with respect to curriculum planning, instruction and assessment.

QCS50A Curriculum and Practices for Primary Science

The nature of science and scientific inquiry for young children will be the central guiding principles in this course. Beginning teachers will gain an overview of the aims, goals, and objectives of the primary science curriculum from the analyses of syllabuses, textbooks, and other curricular materials with respect to educational policies in Singapore. Drawing on contemporary learning theories and research findings, various teaching methods and practices in

primary science will be taught through lectures and practical work.

QCS50B Assessment in Primary Science

The course provides instruction in assessment literacy in primary science. Formal/non-formal methods of assessment as well as the construction and analyses of tests and practical work will be taught. Learners will also know how to use multimodal resources for teaching in and out of the classroom and provide holistic and helpful feedback.

QCS50C Pedagogies for Primary Science

This course introduces student teachers to innovative ways of teaching and learning science both within and outside the classroom through collaborative inquiry activities. Learners will also critically practice and reflect on their teaching skills with respect to curriculum planning, instruction and assessing for understanding.

The Teaching of Social Studies

3 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCL501	Teaching Social Studies in the Primary Classroom I	Core	4	-
QCL502	Teaching Social Studies in the Primary Classroom II	Core	2	-
QCL503	Managing Diversity in the Social Studies Classroom	Core	2	-

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCL50A	Teaching Social Studies in the Primary Classroom	Core	4	-
QCL50B	Managing Diversity in the Primary Social Studies Classroom	Core	2	-
QCL50C	Inquiry in Primary Social Studies	Core	3	-

QCL501 Teaching Social Studies in the Primary Classroom I

This course aims to develop in student teachers an understanding of the nature, scope and purpose of Social Studies in the context of the Singapore primary curriculum. It seeks to equip them with a variety of effective teaching strategies such as concept attainment strategies, story-telling and story-reading and dramatic techniques that are suitable for teaching the key concepts, skills and values in the syllabus. The fundamental principles of assessment will be introduced, relevant resources for Social Studies will be explored and student teachers will also learn how to organise pupils using cooperative learning for effective group work.

QCL502 Teaching Social Studies in the Primary Classroom II

This course aims to provide student teachers with further strategies for teaching the Singapore Primary Social Studies syllabus. There will be reinforcement of understandings and skills in planning effective units of instruction incorporating the use of inquiry and other pupil-centred strategies. The principles and practice of organizing and conducting fieldwork will also be covered.

QCL503 Managing Diversity in the Social Studies Classroom

This course aims to provide student teachers with the knowledge and skills to manage diversity in the classroom. A multicultural approach exploring concepts of culture, identity and diversity will be used. Differentiated instruction as an approach to cater to diverse learners will also be introduced in the course.

QCL50A Teaching Social Studies in the Primary Classroom

This course aims to provide student teachers with an understanding of the nature, scope and goals of Social Studies in the context of the Singapore primary curriculum. It seeks to equip them with the knowledge and skills necessary to engage primary school children in meaningful learning of Social Studies. Student teachers will be given opportunities during tutorial sessions to design unit and lesson plans focused on key concepts / generalizations and key questions, and craft alternative assessments to

assess understanding. The various classroom-based instructional strategies to teach historical, geographical and economic concepts and skills will also be examined.

QCL50B Managing Diversity in the Primary Social Studies Classroom

This course aims to equip student teachers with the knowledge and strategies to teach about diversity in Singapore and to cater to diverse learners in the classroom. Student teachers will be introduced to the principles and strategies of differentiated instruction and opportunities will be provided for them to plan a differentiated lesson for Primary Social Studies. They will also be encouraged to research and reflect critically on issues related to teaching about diversity in their Social Studies lessons so that primary school pupils will be able to make meaningful connections and develop enduring understandings about diversity in Singapore, the region and the world.

QCL50C Inquiry in Primary Social Studies

This course aims to equip student teachers with the understandings, knowledge and skills to teach inquiry-based lessons. They will take the role of curricular-instructional designers, and learn to select or adapt appropriate discussion and/or inquiry models, facilitate effective discussions of issues related to social studies, and conduct process-based inquiry either in the primary classroom and/or in the field. They will be able to select, adapt and/or design suitable resources with the goals of helping their students develop deeper understanding of social

studies content, multiple perspectives and empathy, and research and critical thinking skills so as to make decisions that are based on sound and objective reasons. They will also have an opportunity to plan, organise and conduct an inquiry-based fieldwork.

The Teaching of Tamil Language

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCT501	Teaching of Tamil Language I	Core	4	-
QCT502	Teaching of Tamil Language II	Core	2	-
QCT503	Teaching of Tamil Language III	Core	3	-
QCT504	Teaching of Tamil Language IV	Core	3	-

QCT501 Teaching of Tamil Language I

The curriculum and methodology for teaching Tamil language. The four language skills, the importance of those skills. Various theoretical approaches to language acquisition and learning. The teaching of reading and writing for the lower primary level, using different approaches and integrating the four language skills. Preparation of the student teacher to teach listening and speaking skills at the primary level. The importance of listening and speaking skills in language teaching, various approaches to the teaching of acceptable pronunciation, stress and intonation and the use of the language laboratory to teach pronunciation and listening. The importance of Standard Spoken Tamil and Tamil word processing. National Institute of Education's 'A Teacher Education Model for the 21st Century'(TE 21) and the need to develop the 21st century survival skills.

QCT502 Teaching of Tamil Language II

The teaching of Tamil alphabet, methods of teaching vocabulary and various practices. Teaching of spelling, dictation, comprehension and composition. The role of IT in teaching alphabet, vocabulary, spelling, dictation, comprehension and composition.

The teaching of Tamil poetry and proverbs at the primary level. Emphasis on moral and cultural values through teaching poetry and proverbs through anecdotes and stories. Equip teachers with the necessary knowledge in guiding students to recite the poetry or proverbs learnt.

QCT503   Teaching of Tamil Language III

Teaching of functional grammar in Tamil through different approaches and strategies at the Primary school level. The role and place of functional grammar in improving the pace of learning and teaching of second language. Error analysis, developing grammatical and communicative competence in availing various socio – linguistic situations.

The teaching of Tamil functional grammar at the primary school level. The place of functional grammar in the study of the second language, error analysis, development of grammatical and communicative competency. The teaching of effectively using the textbook in the classroom environment.

QCT504   Teaching of Tamil Language IV

Basic concepts of testing, the construction and administration of tests, item analysis and developing language tests in Tamil. Testing of four languages skills and further remedial exercises for developing the student teachers' language skills. The teaching of setting examination papers and the appropriate strategies to assess students' language skills.

Introducing different strategies for the various levels of students so as to help student teachers accommodate the needs of the children.

The Teaching of Civics and Moral Education (Tamil)

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QCZ505	Teaching of Civics and Moral Education I (Tamil)	Core	3	-
QCZ506	Teaching of Civics and Moral Education II (Tamil)	Core	3	-

QCZ505 Teaching of Civics and Moral Education I (Tamil)

The historical background to Moral Education in Singapore Schools, the aims of Moral Education and the aims of Civics and Moral Education and the policy of the Ministry of Education on moral education. The various approaches to the teaching of moral education, viz cultural transmission, cognitive development, consideration and values clarification approaches. Practical classroom skills to conduct moral education lessons effectively through the use of the expository, tutorial and inquiry methods. Special use of role play, puppets and field trips and using electronic media such as IT and video. Classroom management, lesson preparation and grouping pupils for monitoring progress. Familiarisation of student teachers with the CME curriculum to prepare them to teach moral education at the primary level through different approaches. The use of learning journey to facilitate the teaching process of CME.

QCZ506 Teaching of Civics and Moral Education II (Tamil)

Classroom management and strategies in the teaching of moral education. The text books used and the core values such as Love and Humility, Filial Piety, Harmonious Family, Courtesy, Responsibility,

Compassion and Loyalty and 28 moral values. Hands-on experience and presentation of specific lessons to enable student teachers to teach the programme effectively. Understanding of cultural practices as important festivals and their values, places of worship and customs and traditions of different people in Singapore. Questions about NE messages, understanding and acceptance among different races in Singapore. The Singapore heritage, the constitution and cultural patterns, insight and understanding of the different races, cultures and religions.

Subject Knowledge [For PGDE (Primary)(Art)]

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QSA501	Two Dimensional Exploration	Core	2	-
QSA502	Three Dimensional Exploration	Core	2	-
QSA503	New Media Exploration	Core	2	-
QSA504	Visual Literacy	Core	2	-

QSA501 Two Dimensional Exploration

This course is an introduction to the techniques and technologies involved in Drawing and Painting from both observational and expressive perspectives. Student teachers will have an opportunity to learn about the tools used as well as develop process skills like responsiveness, comparison and reflection, that are involved in art making. This course will reinforce student teachers' existing knowledge and is designed to give them well rounded competencies in the two dimensional media.

QSA502 Three Dimensional Exploration

This course will provide primary student teachers with the opportunities to work in an extended, in-depth manner with aspects of three-dimensional studies. Student teachers will be able to learn a range of three-dimensional processes and techniques, including time-based and site-based installation works.

QSA503 New Media Exploration

This course introduces students to foundational aspects of working with New Media technologies. It will equip student teachers with fundamental and technical knowledge of and skills in digital camera handling. The course will also inculcate in student teachers the abilities to explore digital still-image making, digital videography and stop-motion animation photography, with emphasis on process skills such as narrative and sequencing that are important in new media studies.

QSA504 Visual Literacy

Visual images are ubiquitous in our society. They come in different forms, such as art, architecture, technical illustration, computer graphics and digital photographs. They perform different functions, from offering the viewer an aesthetic experience to providing entertainment, as well as communicating information. This course aims to familiarize student teachers with common modes of interpreting visual images. Using examples from wide-ranging historical periods and geographical locations, they will learn the fundamentals of relating the visual elements of an image to the context of its creation and reception. They will also gain an understanding of how visual images work in tandem with non-visual forms, such as the written text and sound, to generate meanings. The course will also explore how knowledge of Visual Literacy can contribute to the teaching of art in the primary school classroom.

English Language

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QSE50A	Grammar	Core	2	-
QSE50B	Children's Literature	Core	2	-

QSE50A Grammar

This course introduces students to the grammatical structures of the English Language, enabling them to understand the language requirements of the English Language Syllabus 2010. It looks at how grammar works, and how words and larger constituents may be analyzed according to meaning, form and function. Student teachers will be equipped with grammatical knowledge required for effective classroom teaching and assessment.

QSE50B Children's Literature

This course will have two slants. **Theoretically**, the course will expose student teachers to various commendable children's books in different formats and genres. **Pedagogically**, teachers will learn how to maximize children's literature in order to expose our pupils to "a strong foundation and rich language for all" as stated in the 2010 English Language Syllabus.

Mathematics

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QSM50A	Number Topics	Core	2	-
QSM50B	Geometry Topics	Core	2	-

QSM50A Number Topics

This course provides the foundational understanding of arithmetic topics which form a major portion of the primary mathematics curriculum. Problem solving processes will be introduced and re-visited in the different topics. Course topics are: Problem solving; Foundations of the Hindu-Arabic System; Algorithms on number operations in a place value system; Classification of number systems; Divisibility; Ratio, proportion and rates.

QSM50B Geometry Topics

This course aims to equip the primary mathematics teacher with a deeper understanding of geometry and measurement topics in the primary mathematics curriculum. Processes such as mathematical deduction and induction will be emphasized. Topics are: Mathematical deduction and induction; Basic elements of geometry as study of space in 2 and 3 dimensions; Properties associated with parallel lines; Properties of geometrical figures; Similarity and Congruency; Measurement; Constructions and proofs.

Science

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QSS50A	Topics in Physical Science for Primary Science Teaching	Core	2	-
QSS50B	Topics in Biological Science for Primary Science Teaching	Core	2	-

QSS50A Topics in Physical Science for Primary Science Teaching

This course deals with the theoretical and practical aspects of Physical Science topics from and beyond the current Primary Science Curriculum. Some of the topics covered include matter and materials, environment, forces and motion, forms of energy, energy conversions, heat, light, colour, magnetism, electricity.

QSS50B Topics in Biological Science for Primary Science Teaching

This course deals with the theoretical and practical aspects of topics in Biological Science from the Primary Science Curriculum. The topics to be discussed include a tour of the cell, diversity of plants and animals and their interaction with the environment, plant form and function, animal form and function with an emphasis on the human body, ecology and environmental issues.

Social Studies

2 CS Track

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QSL50A	Disciplinary Foundations in Primary Social Studies: Geography	Core	2	-
QSL50B	Disciplinary Foundations in Primary Social Studies: History	Core	2	-

QSL50A Disciplinary Foundations in Primary Social Studies: Geography

This course aims to equip student teachers with an understanding of the importance of geographical understanding for citizenship education in Social Studies. Student teachers will gain knowledge of children and their geographical ideas and learn about the core geographical concepts in the Social Studies syllabus. They will acquire knowledge of selected topics on the geography of Singapore and Southeast Asia, and learn to use maps, photographs and other geographical resources. Field experiences will be provided and they will have an opportunity to do a geographical inquiry project on an issue that Singapore faces.

QSL50B Disciplinary Foundations in Primary Social Studies: History

This course aims to acquaint student teachers with an understanding of the disciplinary foundations of History that underpin primary school Social Studies. It will also develop in them an understanding of the importance of historical understanding for citizenship education in Singapore. Student teachers will gain

knowledge of overarching historical concepts and have experience in historical processes such as historical inquiry and at the same time, explore how children can learn such knowledge and skills. They will acquire knowledge of selected topics from the histories of Singapore, Southeast Asia and early world civilizations as well as become cognizant of available historical resources that will enable them to meaningfully teach the primary school Social Studies curriculum

Practicum

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QPR500	Teaching Practice	Core	10	-

Teaching Practicum is a very important component of the PGDE programme. Student teachers will apply their knowledge and skills for the teaching subjects they are trained in and develop their teaching competencies in a variety of instructional contexts and at different levels under the guidance and supervision of cooperating teachers, school coordinating mentors and university lecturers. They will learn from experienced school mentors about the schooling process and prepare themselves for their roles and responsibilities in teaching.

QPR500 Teaching Practice

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 assessment 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	Course Title	Course Category	No of AUs	Pre-requisites
QLK501	Communication Skills for Teachers	Core	2	-

QLK501 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 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. 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.

Use of Chinese in Teaching

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QLC501	Use of Chinese in Teaching	Core	2	-

QLC501 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.

Use of Malay in Teaching

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QLM501	Use of Malay in Teaching I	Core	1	-
QLM502	Use of Malay in Teaching II	Core	1	-

QLM501 Use of Malay in Teaching I

The development of communicative proficiency in the use of Malay in primary schools. Accuracy and mastery in pronunciation, including the new pronunciation system (Sebutan Baku) and communication skills inside and outside the classroom. Reading aloud, spontaneous dialogue, giving instructions, questioning techniques, explaining concepts, lecturing and debating skills.

QLM502 Use of Malay in Teaching II

Greater exposure and practice for student teachers to develop their proficiency and confidence as Malay Language teachers in the primary school. Essay and letter writing, report writing, academic and creative writing. Literacy in Jawi will be included.

Use of Tamil in Teaching

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QLT501	Use of Tamil in Teaching I	Core	1	-
QLT502	Use of Tamil in Teaching II	Core	1	-

QLT501 Use of Tamil in Teaching I

Development of oral proficiency and use of Standard Spoken Tamil in the classroom and school environment. Phonetics to help student teachers acquire accuracy and mastery in pronunciation and other communication skills which we used inside and outside the classroom. Common errors in speaking with spoken and written Tamil and the syntactical aspects of Tamil. Potential of IT as a language teaching tool. Emphasizing the difference between standard writing Tamil and standard spoken Tamil.

QLT502 Use of Tamil in Teaching II

Written communication skills. Essay writing, report writing and creative writing and other communication skills that are necessary for various professional roles that teachers assume in primary schools. Using IT to teach written skills. Able to differentiate the tones used in different forms (formal and informal) of writing.

PGDE Programme
Teaching Physical Education
at Primary Level

Curriculum Structure

Table 5: Curriculum Structure of the PGDE (Physical Education) (Primary) Programme

Year 1

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED001	Professional Practice and Inquiry I	0
	QED506	Teaching and Managing Learners at the Primary Level	2
	QED507	ICT for Meaningful Learning	2
	QED509	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED510	The Social Context of Teaching and Learning	1
	QED511	Character and Citizenship Education	1
	QED512	Assessing Learning and Performance	1
	QED513	Group Endeavours in Service Learning	1
CURRICULUM STUDIES			
Physical Education	QPC50A	Principles of Games	2
	QPC50B	Instructional Methods in Physical Education	2
	QPC50C	Badminton	2
	QPC50D	Basketball	2
	QPC50E	Fundamental Movement Skills	2
	QPC50G	Curriculum Gymnastics	2
	QPC50H	Soccer	2
	QPC50J	Outdoor Residential Camp	1
ACADEMIC SUBJECTS			
Physical Education	QPA50A	Introduction to Physical Education & Sport	2
	QPA50B	Growth & Motor Development	2
	QPA50C	Anatomical & Biomechanical Foundations of Physical Activity	3
	QPA50D	Physiology of Exercise	2
PRACTICUM			
	QPR502	Teaching Practice 1	5
LEADS			
	QLK501	Communication Skills for Teachers	2

Year 2

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED002	Professional Practice and Inquiry II	1
CURRICULUM STUDIES			
Physical Education	QPC60A	Instructional Strategies in Teaching of Physical Education	2
	QPC60B	Dance	2
	QPC60C	Softball	2
	QPC60D	Track & Field	2
	QPC60E	Fitness & Health	2
	QPC60G	Floorball	2
	QPC60H	Volleyball	2
CURRICULUM STUDIES (Select one Curriculum Studies Subject)			
English Language *	QCE501	Teaching Reading and Writing	6
	QCE502	Teaching Oral Communication	2
Mathematics	QCM501	Teaching and Learning of Primary Mathematics I	6
	QCM502	Teaching and Learning of Primary Mathematics II	2
ACADEMIC SUBJECTS			
Physical Education	QPA60A	Foundations of Psychology & Motor Learning in Physical Activity	3
PRACTICUM			
	QPR602	Teaching Practice 2	10

*   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 on Page 13.

Contents of Courses

Education Studies

The courses for QED001-002 and QED506-513 are described in Education Studies section under PGDE Programme, Teaching at Primary Level.

Curriculum Studies

The Teaching of ….

Descriptions of courses for Curriculum Studies subjects are available in Curriculum Studies section under PGDE Programme, Teaching at Primary Level.

Language Enhancement and Academic Discourse Skills

Communication Skills for Teachers

Description of course is available in Language Enhancement and Academic Discourse Skills section under PGDE Programme, Teaching at Primary Level.

Curriculum Studies

The Teaching of Physical Education

Year	Course Code	Title	Course Category	No. of AUs	Pre-requisites
1	QPC50A	Principles of Games	Core	2	-
	QPC50B	Instructional Methods in Physical Education	Core	2	-
	QPC50C	Badminton	Core	2	* apply
	QPC50D	Basketball	Core	2	* apply
	QPC50E	Fundamental Movement Skills	Core	2	-
	QPC50G	Curriculum Gymnastics	Core	2	* apply
	QPC50H	Soccer	Core	2	* apply
	QPC50J	Outdoor Residential Camp	Core	1	-
2	QPC60A	Instructional Strategies in Teaching of Physical Education	Core	2	-
	QPC60B	Dance	Core	2	* apply
	QPC60C	Softball	Core	2	* apply
	QPC60D	Track & Field	Core	2	* apply
	QPC60E	Fitness & Health	Core	2	-
	QPC60G	Floorball	Core	2	* apply
	QPC60H	Volleyball	Core	2	* apply

* Student teachers are expected to have some basic skills BEFORE the start of the course.

Year 1

QPC50A Principles of Games

This course is designed to introduce student teachers to the concepts, theories and principles underpinning the teaching of games and to develop their pedagogical understanding in a broad spectrum of games.

They will also acquire lesson ideas, content development/progressions and teaching strategies for the teaching of target*, invasion, net/barrier and striking/fielding games suitable for use in primary schools. Student teachers will be introduced to developmentally appropriate teaching styles/ strategies/ approaches/models that develop their pupils into confident and active participants of the game.

These approaches include Teaching Games for Understanding (TGFU), Play Practice, the Games Concept Approach (GCA) and the Sport Education Model (SEP). Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (ICT) will also be introduced.

* Target games will be prioritised.

QPC50B Instructional Methods in Physical Education

This course is designed to provide student teachers with the opportunity to develop foundation skills of planning, teaching and evaluating school physical education in primary schools.
Student teachers will be introduced to content selection, organisation, instructional methods, direct teaching styles, task presentation, task, time and student management systems, observation of student performance, as well as feedback provision. Course format will include lectures, discussions, practical experiences, and microteaching.

QPC50C Badminton

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in badminton and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of badminton in primary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into confident and active participants of the game.

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC50D Basketball

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in Basketball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of Basketball in primary schools.
Student teachers will be introduced to developmentally appropriate teaching styles/strategies/approaches/models that develop their pupils into confident and active participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC50E Fundamental Movement Skills

This course provides student teachers with an understanding of the concepts, principles and practices of teaching fundamental movement skills in primary school.

It provides an overview of the role of fundamental movement within the Singapore's school physical education curriculum, focusing on developing fundamental movement skill proficiencies at the lower primary, application in modified games in the upper primary, and relationship to the variety of specialised

sports skills at the secondary levels. Specifically, this course will address the various manipulative, locomotor and nonlocomotor skills applied within a movement framework that helps define the qualitative and quantitative aspects of human movement effort. Student teachers will have the opportunity to develop their own movement proficiency, learn to design developmentally appropriate lesson plans that incorporate the relevant teaching approaches with appropriate equipment to facilitate progressions in the learning process. Student teachers will also learn to employ appropriate formative and summative assessment tools in order to optimise pupils' participation and learning.

QPC50G Curriculum Gymnastics

This course will introduce curriculum gymnastics through a developmental approach that allows the participants to explore movement themes largely on floor activities, gradually progressing from simple to complex apparatus designs. More advanced floor and apparatus skills will be taught with a focus on progression as well as safety.

Emphasis will be on the cognitive and affective development of the participants through appropriate pedagogical styles of teaching suitable for primary schools. It is anticipated that participants will complete the course with a heightened level of confidence and personal conviction for teaching gymnastics in a progressive, creative and safe manner.

QPC50H Soccer

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in soccer and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of soccer in primary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into confident and active participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC50J Outdoor Residential Camp

The 5- Day Outdoor Residential Camp in Outward Bound School, Singapore is a compulsory course for all Year 1 PESS student teachers. The programme will enable student teachers to understand the role of Outdoor Education in schools, MOE Risk Assessment Management System (RAMS) and facilitation of learning in an outdoor context.

The content is customized to align to MOE's emphasis on teaching values through outdoor

education and NIE Graduate Teacher Competencies Framework. In this camp, student teachers will be exposed to facilitation models, adventure activities, communal living and essential outdoor skills. The latter will include camp craft, expedition planning and navigation.

Year 2

QPC60A Instructional Strategies in Teaching of Physical Education

This course, second in a series, builds on foundation pedagogical knowledge and skills appropriate for primary school students.

It develops competence in a variety of teaching styles evolving from Mosston and Ashworth's spectrum including inquiry, problem solving, group work and peer-teaching. A concept approach to teaching games is emphasized. The focus is on planning, teaching and evaluating situationally relevant lessons.

Student teachers will be encouraged to refine their own teaching through systematic observation. Instructional strategies will include lectures, seminars, peer- and/or micro-teaching and assignments.

QPC60B Dance

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and performance in dance and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of dance in primary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches that develop their pupils into confident and active participants of dance. These

approaches include teaching methods (problem-solving, facilitation, command style, reciprocal) and resource for the planning and instruction of folk dances and creative dance. It also aims to give student teachers a chance to discover the creative juice in them and draw on the elements of dance to create their own dances.

Relevant Sports Science knowledge behind effective techniques, skills, and their development in dance, various dance-specific assessment as well as the use of information technology (IT) will also be introduced.

QPC60C Softball

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in Softball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of Softball in primary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into confident and active participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of

skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC60D Track and Field

This course is designed to impart the necessary skills and knowledge to pre-service teachers to teach Athletics (track and field events) to youths in a primary school setting.

Student teachers will be introduced to developmentally appropriate teaching approaches such as Teaching Games for Understanding (TGFU), Games Concept Approach (GCA), and Sport Education Model (SEP). Relevant sport science knowledge, assessment tools, and the use of information technology will be incorporated.

QPC60E Fitness and Health

This course is designed to help student teachers acquire knowledge and skills in health, wellness and fitness so as to promote and develop a lifelong physically active and healthy lifestyle in their pupils.

Student teachers will be introduced to developmentally appropriate activities to develop various components of fitness and design safe and effective exercise programmes for their pupils.

QPC60G Floorball

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in floorball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of floorball in primary schools.

Student teachers will be introduced to developmentally appropriate teaching styles/strategies/approaches/models that develop their pupils into confident and active participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC60H Volleyball

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in Volleyball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of Volleyball in primary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into confident and active participants of the

game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

Academic Subjects

Physical Education

Year	Course Code	Title	Course Category	No. of AUs	Pre-requisites
1	QPA50A	Introduction to Physical Education & Sport	Core	2	-
	QPA50B	Growth & Motor Development	Core	2	-
	QPA50C	Anatomical & Biomechanical Foundations of Physical Activity	Core	3	-
	QPA50D	Physiology of Exercise	Core	2	-
2	QPA60A	Foundations of Psychology & Motor Learning in Physical Activity	Core	3	QPA50B

QPA50A Introduction to Physical Education & Sport

This course emphasizes concepts related to the broad field of physical education and sport. It provides an overview of the disciplines that study the field's philosophical, historical, cultural, and sociological foundations and their applications to professional practice.

The course examines Singapore's PE and Sports infrastructure and their relationships in promoting participation in sports from recreational to high performance levels. The daily work in physical education and sport, looking at the traditional field of teaching and coaching, is also highlighted. Current issues and future directions in the field are also explored and discussed.

QPA50B Growth & Motor Development

This purpose of this course is to study physical growth and motor development, with particular emphasis during the growing years. Factors influencing physical growth and motor development, age-related changes, individual, gender-related and maturity-associated variations in growth and development and variations during pubertal growth period will be discussed. Modelling the principles and the processes underlying growth and motor development through physical activities in teaching physical education will also be discussed.

QPA50C Anatomical & Biomechanical Foundations of Physical Activity

This course enables student teachers to relate human anatomy to physical activities and to apply the principles of biomechanics to the teaching of physical skills.

Structural anatomy deals with the knowledge and an understanding of the bones, joints and muscle structure that produces movement. Biomechanics is the study of a biological system by means of mechanics.

This course introduces the basic mechanical concepts and principles that govern human movement. At the end of the course, student teachers will be expected to perform basic qualitative analysis of physical activities using basic concepts of mechanics and anatomy. This course would also provide a brief introduction to quantitative analysis of physical activities.

QPA50D Physiology of Exercise

The purpose of this course is to equip student teachers in PE with an understanding of fundamental human and exercise physiology so as to enable them to design safe and effective lessons or training for 1) students during PE lessons and 2) student athletes gearing for sports performance.

A lecture and laboratory based foundation course in exercise physiology for student teachers in Physical Education (PE). The principal areas covered include the energy metabolism for exercise, aerobic performance and anaerobic performance, sex and age-associated differences in exercise performances and thermoregulation in the heat. The associated teaching implications will be brought to the fore. In addition, aspects of functional anatomy dealing with the various systems of the body and the part each plays in physical performance, health and fitness will be discussed in this course.

QPA60A Foundations of Psychology & Motor Learning in Physical Activity

This is an introductory course on sport and exercise psychology as well as motor learning. Specifically, the course will focus on topics and issues related to the social psychological variables that influence participation in physical activities, the environments in which sport and exercise participants operate, and selected outcomes of such participation. This course also introduces student teachers to some of the theories and practices associated with skill acquisition. The focus is specifically on how the individual develops, learns and performs motor skills.

Student teachers will be introduced to these major concepts through a series of lectures, readings, and laboratory exercises.

Practicum

Course Code	Course Title	Course Category	No of AUs	Pre-requisites
QPR502	Teaching Practice 1	Core	5	-
QPR602	Teaching Practice 2	Core	10	TP1

Teaching Practicum is a very important component of the PGDE programme. Student teachers will apply their knowledge and skills for the teaching subjects they are trained in and develop their teaching competencies in a variety of instructional contexts and at different levels under the guidance and supervision of cooperating teachers, school coordinating mentors and university lecturers. They will learn from experienced school mentors about the schooling process and prepare themselves for their roles and responsibilities in teaching.

The Practicum is developmental in nature. It comprises two school attachment periods, i.e., Teaching Practice 1 (TP1), and Teaching Practice 2 (TP2).

QPR502   Teaching Practice 1

The 5-week Teaching Practice 1 is to help the student teachers begin to learn to teach independently. They will be provided opportunities to observe their CTs' lessons. Eventually they will learn to plan their own lessons to teach, prepare the relevant resources and manage pupils independently, in consultation with their CTs.

QPR602   Teaching Practice 2

In this 10-week Teaching Practice 2, 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 assessment 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.

PGDE Programme
Teaching at Secondary Level

Curriculum Structure

The curriculum structures for various specialisations of the PGDE (Secondary) programme are shown in Tables 6, 7 and 8 below:

Table 6: Curriculum Structure of the PGDE (Secondary) (General) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED021	Professional Practice and Inquiry I	0
	QED022	Professional Practice and Inquiry II	1
	QED526	Teaching and Managing Learners at the Secondary/Junior College Level	2
	QED527	ICT for Meaningful Learning	2
	QED529	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED530	The Social Context of Teaching and Learning	1
	QED531	Character and Citizenship Education	1
	QED532	Assessing Learning and Performance	1
	QED533	Group Endeavours in Service Learning	1
CURRICULUM STUDIES (Any two as assigned)			
	QCK	The Teaching of Accounting	9
	QCA	The Teaching of Art	9
	QCB	The Teaching of Biology	9
	QCY	The Teaching of Chemistry	9
	QCQ	The Teaching of Computer Applications	9
	QCN	The Teaching of Design and Technology	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
	QCX	The Teaching of Food and Consumer Sciences	9
	QCD	The Teaching of Malay Language	9
	QCM	The Teaching of Lower Secondary Mathematics	9

	QCM	The Teaching of Mathematics	9
	QCI	The Teaching of Music	9
	QCP	The Teaching of Physics	9
	QCL	The Teaching of Social Studies	9
	QCT	The Teaching of Tamil Language	9
PRACTICUM			
	QPR520	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK520	Communication Skills for Teachers	2
Use of Malay in Teaching	QLM522+	Use of Malay in Teaching	1
	QLM523+	Language etiquettes: Proverbs and Language Refinement in the Teaching of Malay Language	1
Use of Tamil in Teaching	QLT520++	Use of Tamil in Teaching 1	1
	QLT521++	Use of Tamil in Teaching 2	1

Note:
*   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 on Page 13.

+   Student teachers offering the Teaching of Malay Language as their second CS subjects must take QLM522 and QLM523 in addition to QLK520. Details of Use of Malay in Teaching are available on Page 158.

++   Student teachers offering the Teaching of Tamil Language as their second CS subjects must take QLT520 and QLT521 in addition to QLK520. Details of Use of Tamil in Teaching are available on Page 159.

Table 7: Curriculum Structure of the PGDE (Secondary) (Chinese) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED021	Professional Practice and Inquiry I	0
	QED022	Professional Practice and Inquiry II	1
	QED526	Teaching and Managing Learners at the Secondary/Junior College Level	2
	QED527	ICT for Meaningful Learning	2
	QED529	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED530	The Social Context of Teaching and Learning	1
	QED531	Character and Citizenship Education	1
	QED532	Assessing Learning and Performance	1
	QED533	Group Endeavours in Service Learning	1
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

Table 8: Curriculum Structure of the PGDE (Secondary) (Malay/Tamil) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED021	Professional Practice and Inquiry I	0
	QED022	Professional Practice and Inquiry II	1
	QED526	Teaching and Managing Learners at the Secondary/Junior College Level	2
	QED527	ICT for Meaningful Learning	2
	QED529	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED530	The Social Context of Teaching and Learning	1
	QED531	Character and Citizenship Education	1
	QED532	Assessing Learning and Performance	1
	QED533	Group Endeavours in Service Learning	1
CURRICULUM STUDIES (Select either Malay or Tamil Language)			
Malay Language	QCD522	Malay Language Curriculum: Approaches and Skills in the Teaching and Learning of Malay Language	4
	QCD523	The Teaching and Learning of Malay Language Grammar	2
	QCD524	Assessments in the Teaching and Learning of Malay Language	3
Tamil Language	QCT520	The Teaching of Tamil Language I	5
	QCT521	The Teaching of Tamil Language II	4
CURRICULUM STUDIES (Select the same language as in first Curriculum Studies)			
Malay Literature	QCJ527	Sociocultural Context of Literacy	2
	QCJ528	The Teaching of Malay Modern Literature	4
	QCJ529	The Teaching of Traditional Malay Literature	3
Tamil Literature	QCJ525	The Teaching of Tamil Literature I	5
	QCJ526	The Teaching of Tamil Literature II	4
PRACTICUM			
	QPR520	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK520	Communication Skills for Teachers	2
Use of Malay in Teaching	QLM522	Use of Malay in Teaching	1
	QLM523	Language etiquettes: Proverbs and Language Refinement in the Teaching of Malay Language	1
Use of Tamil in Teaching	QLT520	Use of Tamil in Teaching 1	1
	QLT521	Use of Tamil in Teaching 2	1

Contents of Core Courses

Education Studies

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QED021	Professional Practice and Inquiry I	Core	0	-
QED022	Professional Practice and Inquiry II	Core	1	-
QED526	Teaching and Managing Learners at the Secondary/Junior College Level	Core	2	-
QED527	ICT for Meaningful Learning	Core	2	-
QED529	Educational Psychology: Theories and Applications for Learning and Teaching	Core	1	-
QED530	The Social Context of Teaching and Learning	Core	1	-
QED531	Character and Citizenship Education	Core	1	-
QED532	Assessing Learning and Performance	Core	1	-
QED533	Group Endeavours in Service Learning	Core	1	-

QED021 Professional Practice and Inquiry I

This course provides the foundation for student teachers to understand the process of integrating and aggregating their learning, be reflective and establish the theory-practice connection to their practice. In particular, this course will provide avenues for student teachers to (i) explore and reflect on their beliefs as teachers, (ii) understand the process of inquiring into their teaching and (iii) articulate their growing understanding of what constitutes a 21st century educator pivoted on NIE's value-based V^3SK framework.

QED022 Professional Practice and Inquiry II

This course builds on Professional Practice and Inquiry I. Embedded within the PPI course in the use of an e-Portfolio to facilitate student teachers' construction of their conceptual framework of learning and teaching. This course aids the aggregation and integration of student teachers' learning from the various courses in NIE to prepare them for their teaching practice. During teaching practice, the e-Portfolio facilitates student teachers' inquiry into their own practice with a focus on the Theory-Practice Nexus. In addition, student teachers articulate their growing understanding of what constitutes good teaching in relation to NIE's Graduand Teacher Competencies (GTC).

QED526 Teaching and Managing Learners at the Secondary/ Junior College Level

Teachers attend to learners of various needs and abilities across their different stages of development. Beginning Teachers require relevant classroom management skills and pedagogical approaches to effectively accommodate their students' differentiated learning needs. By the end of the course, student teachers will be aware of the necessary skills and knowledge required of Beginning Teachers to design conducive learning environments supported by relevant pedagogical approaches and to manage diverse learners in their classrooms.

QED527 ICT for Meaningful Learning

This course prepares student teachers to engage learners in meaningful learning with the use of ICT. Student teachers will learn to analyse the affordances of technology tools for promoting

meaningful learning. Opportunities will be provided for student teachers to analyse critical issues related to designing technology-enabled lessons, supported by appropriate instructional strategies. They also need to consider appropriate measures in ensuring cyber wellness.

QED529 Educational Psychology: 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, and personal development occurs.

QED530 The Social Context of Teaching and Learning

This course aims to promote deeper understanding about the socio-political development of the Singapore education system among pre-service teachers at the National Institute of Education. They will appreciate the functions of the education 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 teachers, teacher, 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. It is hoped that pre-service teachers will become aware of the challenges that teachers face when engaging in pedagogical developments and initiatives in schools, and be empowered to become innovative, effective and caring teachers. Pre-service teachers are encouraged to link the content learnt in this course to what they have learnt in other courses at NIE, as they discuss major challenges and issues in the Singapore education system.

QED531 Character and Citizenship Education

This course helps pre-service teachers to understand the key concepts and issues in Character and Citizenship Education (CCE) and get a good grasp of their roles in CCE in school. As schools play a nurturing role in the development of students, teachers have the responsibility to be aware of their professional commitments with regard to CCE: What roles do teachers play in the character development of students? What are the relevant attitudes, knowledge and skills that teachers should possess to enable them to contribute meaningfully to the character development of their students in schools? How should teachers introduce students to the notions of citizenship through citizenship education?

Hence, the CCE course will allow pre-service teachers in NIE to learn about character

development, elements of citizenship, key approaches and pedagogies for CCE, as well as current MOE CCE policy and curriculum. Furthermore, the course will emphasize the relevant knowledge and skills teachers will need in order to deliver the CCE curriculum. Pre-service teachers will learn about the policies associated with CCE and be given opportunities to discuss the implementation of CCE in their future roles as teachers.

QED532 Assessing Learning and Performance

This course provides participants with the ability to understand and apply the basic principles of educational assessment. The course will discuss the principles of educational measurement of learning. It aims to equip future teachers with the necessary knowledge and skills to monitor, appraise and evaluate learners' content knowledge, progress and performance achievement. This course will cover traditional paper and pencil testing methods and performance-based, authentic assessment procedures. The course will also include discussions on using assessment for learning.

QED533 Group Endeavours in Service Learning (GESL)

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. GESL provides the opportunity for groups to broaden their knowledge and understanding of underprivileged communities.

Service and learning objectives are determined before the group starts on their project. Each group has a staff mentor who mentors and guides the group, and eventually assesses the group on their project. GESL seeks to empower student teachers through a hands-on approach of finding out the need of the community and serving them. It is hoped that through the experience of conducting a service-learning project, each student teacher would have developed social-emotional learning competencies and practiced, among other things, project management skills, teamwork, needs analysis, decision-making, empathy, and learn more about the community around us.

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

This course places greater emphasis on higher order thinking skills, entrepreneurial pursuits, initiative and independent learning. The latter includes the use of Apps for self-directed learning. In addition, student teachers are inspired to incorporate the MOE initiatives of Thinking Skills, CCE, I&E, FL and TLLM into the curriculum. Modes of assessment and examination requirements for Principles of Accounts at 'O' 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 flipped classroom will be widely used in this course to promote self-directed learning. It complements the other courses to inspire and motivate students to take ownership of learning by empowering student teachers with facilitation skills and embedding evaluation of learning, required to effectively carry out the flipped classroom.

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.

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 applied. 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 ICT to facilitate learning will be covered. Ample opportunities in harnessing ICT 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. The Mixed Mode Delivery (MMD) 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 (MMD) 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. There will be opportunities for student teachers to have exposure in working with schools or other institutions on innovation and enterprise projects or accounting clinics and also engage in reflective practice through Lesson Study.

The Teaching of Art

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCA520	Teaching Art at Secondary Level	Core	2	-
QCA521	Post Practicum Evaluation	Core	1	-
QCA522	Two Dimensional Studies	Core	2	-
QCA523	Three Dimensional Studies	Core	2	-
QCA524	Art practice: In-depth Studio Practice and Pedagogy	Core	2	-

QCA520 Teaching Art at Secondary Level

The course looks into how the teaching of art has evolved over history. It will introduce key classical and contemporary theories of adolescent development and their implication in the visual arts education and examines how these educational theories and concepts influence the teaching and assessment of art in secondary schools

QCA521 Post Practicum Evaluation

Building on the student teachers' practicum experience, the course engages student teachers in relating the various educational theories and concepts learnt in the previous semester to their own art teaching. It will also explore the various practices of schools and examine the underpinning philosophies and values they adopt in their arts programme in relation to government initiatives and policies.

QCA522 Two Dimensional Studies

The emphasis on two dimensional studio practice involving an exploration of theoretical underpinnings of creative processes and curricular implications.

QCA523 Three Dimensional Studies

This course investigates the use of materials such as clay, plaster and wood, exceptionally versatile mediums in the 3Dstudio/classroom. How these materials work as mediums of expression and learning will be discussed in relation to the curricular objectives through an investigation of traditional and contemporary practices and teaching methodologies. The learning of our cultural history through relevant artefacts is also incorporated.

QCA524 Art Practice: In-depth Studio Practice and Pedagogy

Building on the three courses in Semester I, the development by student teachers of a body of work in a chosen area of studio practice, to be used as a focus to investigate and formulate teaching methodologies in secondary art education.

The Teaching of Biology

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCB 523	Curriculum and scientific practices in Biology Education	Core	3	-
QCB 524	Pedagogies and Innovations in Biology Teaching	Core	4	-
QCB 525	Assessment in Biology Teaching	Core	2	-

QCB523 Curriculum and scientific practices in Biology Education

The course consists of 3 Academic units or 36 hours. It can be divided into two parts. Part 1 discusses some issues of the nature of science, scientific literacy and the use of history for teaching Biology. Part 2 develops the pedagogical content knowledge of student-teachers by engaging them in discussing alternative conceptions, difficulties and problems in teaching various Biology topics. The role of resource centres in planning for fieldtrips for Biology teaching outside the classroom will be discussed. Participants be involved in actual field studies and learn to plan and conduct a field trip to a resource centre/nature reserve and present a report on the suitability of the resources available for the teaching of Biology at any given level in schools.

QCB 524 Pedagogies and Innovations in Biology Teaching

The 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 behaviour and safety practices in science will be covered. IT, and its applications and resources for Biology teaching from the Internet, will be explored.

QCB525 Assessment in Biology Teaching

This course will examine issues on the what and why of testing in science, discuss test construction, alternative assessment of practical skills, the setting of tasks for SPA (Science Practical Assessment), marking of examination scripts, and its implications for teachers and teaching styles. Issues and safety measures in conducting Life Sciences experiments will be discussed.

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

Introduction to applied use of the major learning theories, strategies and learning styles with reference to the various instructional approaches appropriate for the teaching of Computer Applications (CPA), such as effective Classroom Management, Exposition, Investigative and Questioning Approach, Authentic Learning, Hands-on Activities and Problem Solving. The use of emerging technologies to enhance learning will be covered. There will be opportunities to practice the lesson planning process and to participate in critique of these lesson plans on CPA.

The Teaching of Design and Technology

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCN523	Teaching and Evaluating the Problem Solving Process	Core	3	-
QCN524	Material Processing	Core	5	-
QCN525	Managing and Teaching the Design and Technology Curriculum	Core	1	-

QCN523 Teaching and Evaluating the Problem Solving Process

The course introduces the student teachers to the teaching and learning environment of the process of designing. It includes a practical approach to design communication, design journal work, and design activities specifically designed to encourage pupils to be creative and critical problem solvers. It enables student teachers to personally experience and practice the process of designing, design thinking and design problem structuring. Projects have been designed to give the student teachers opportunities to experience, practice and develop their skills through designing in action and are directly linked to the design/make environment of QCN524 and the school situation. QCN 523 also includes a simulated teaching environment in which the student teachers have the opportunity to practice, analyse and evaluate peer teaching sessions with special emphasis on introductory and closure procedures, questioning skills and practical demonstrations.

QCN524 Material Processing

Material Processing is a hands-on practical processes course that exposes design and technology student teachers to practical-oriented project work. Student teachers are required to realize mini-projects with focus on basic practical tasks, making skills, tools & equipment, and workshop safety. Projects are also designed with focus on design-and-make routines. Student teachers work with three basic materials namely Metals, Plastics and Wood, and basic electricity and electronics related technology.

QCN525 Managing and Teaching the Design and Technology Curriculum

The course provides student teachers with the opportunity to study and become familiar with the Design and Technology (D&T) syllabuses in relation to its philosophy, implementation and evaluation. It provides an in-depth analysis of the curriculum in conjunction with the development of a scheme of work that comprises meaningful and holistic design projects. The effective integration of content knowledge, process knowledge and relevant 'technology' into D&T curriculum and related project work is also covered.

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 and leveraging on ICT. Ample opportunities in harnessing ICT and embedding alternative assessments in the teaching and learning of EBS to enhance the effectiveness of the teaching-learning process will be provided. Differentiated instruction and classroom management are discussed too. Emphasis is given to

building a student-centred environment to enhance the teaching and learning of EBS.

The Mixed-Mode Delivery (MMD) 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

Besides modes of assessment and examination requirements for EBS, the crafting of examination questions and marking schemes, as well as alternative assessments will be covered. Further instructional approaches which will extend discussion to the development of learning communities, inquiry, use of ICT and the flipped classroom will be provided. The focus will be on strategies and techniques that are specially catered to enhance teaching and learning to the less academically inclined pupils by harnessing ICT. Useful tools for self directed learning, online assessment, and back chanelling for providing feedback and evaluation of learning are introduced in this course too.

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 such as a budiness incubation programme. Other than using games and game show, student teachers will be exposed to organising events and field-trips using mobile devices 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 on Page 13.

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 student 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. Student 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 plan and then, individually plan the resource packages to enact the unit plan. In addition, student teachers will be exposed to the key concepts of assessment and have hands-on practice on assessing reading, writing, speaking and listening ('the' core English Language skills). 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, create the resource packages and planning assessment tasks. In the process of unit planning and creating the resource packages and assessment tasks, they will be exposed to the principles of curriculum design, material selection, adaptation and development and assessment practices. 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 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
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 history teaching by taking student teachers out of the classroom. The course focuses on how field trips can be used to make history 'come alive' for students, and how inquiry-based fieldtrips can deepen students' understandings of history and the past. As part of the course, student teachers will 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 design activities that will enhance students' awareness of their culture and heritage.

QCH525 Teaching and Learning of Secondary History

This 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. Critical thinking, ICT and source-work have changed the way the subject is taught in schools. Newer developments such as 'teaching for historical

understanding' and 'inquiry-based learning in history' require student teachers to also be familiar with the means to approach historical instruction in light of these initiatives. As such, this course is designed to equip student teachers with various strategies such as cooperative learning, the use of simulation and role-play, concept-based teaching, and the integration of source materials in lessons, as part of teaching through historical inquiry.

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 as specified in the assessment framework. 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 Food and Consumer Sciences

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCX524	Home Economics Curriculum and Evaluation	Core	2	-
QCX525	The Teaching of Food and Nutrition	Core	2	-
QCX526	The Teaching of Textiles and Clothing	Core	2	-
QCX527	The Teaching of Consumer Education	Core	3	-

QCX524 Home Economics Curriculum and Evaluation

The nature, history and philosophy of Home Economics; the rationale and objectives of teaching Home Economics; resources and teaching strategies which focus on learner involvement and developing innovation & enterprise; the use of appropriate evaluation procedures in facilitating effective learning will be discussed.

QCX525 The Teaching of Food and Nutrition

The Food and Nutrition syllabi at the lower and upper secondary levels; strategies and methods to teach basic principles of food management; organization of investigative and practical work, emphasis on coursework development for the GCE 'O' and 'N' Level syllabi.

QCX526 The Teaching of Textiles and Clothing

The pedagogical aspects of topics such as textile studies, planning of clothing needs of individuals and families, consumer awareness in the choice and care of clothes, use and care of equipment, and skills in clothing construction.

QCX527 The Teaching of Consumer Education

Various approaches to the teaching of family and consumer education, the concepts of needs and wants, as well as how to make smart consumer decisions, to identify priorities, to set realistic economic goals and manage resources effectively; integration of IT skills, technology, critical thinking and becoming entrepreneurial in promoting Home Economics/Family and Consumer Education in school will be explored.

The Teaching of Malay Language

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCD522	Malay Language Curriculum: Approaches and Skills in the Teaching and Learning of Malay Language	Core	4	-
QCD523	The Teaching and Learning of Malay Language Grammar	Core	2	-
QCD524	Assessments in the Teaching and Learning of Malay Language	Core	3	-

QCD522 Malay Language Curriculum: Approaches and Skills in the Teaching and Learning of Malay Language

Introduction to Malay language curriculum objectives, syllabus & content, development and implementation in secondary school. Basic language skills – with emphasis on the teaching and learning of the four basic language skills, namely listening, speaking, reading and writing skills with special emphasis on pupils' differing learning styles, abilities & varied academic programmes. Lesson plans & the use of appropriate media and teaching and learning materials.

QCD523 The Teaching and Learning of Malay Language Grammar

Various strategies in teaching of Malay grammar, i.e. the affixes, sentence construction, active & passive voice, etc. Student will work on several issues of practical concern to the teaching of Malay: Classroom organisation, and design, appropriate use of educational technology.

QCD524 Assessments in the Teaching and Learning of Malay Language

Testing and assessment – basic concepts such as validity & reliability, objectivity and the construction and administration of test items and materials. Authentic and alternative assessments, rubric design and their application in classroom settings with special emphasis on students' varied learning needs and styles.

The Teaching of Malay Literature

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCJ527	Sociocultural Context of Literacy	Core	2	-
QCJ528	The Teaching of Malay Modern Literature	Core	4	-
QCJ529	The Teaching of Traditional Malay Literature	Core	3	-

QCJ527 Sociocultural Context of Literacy

The focus of this course is on literacy as a socially-situated practice. The course examines how gender, social class, economic position, language, and ethnicity influence, and are influenced, by adolescents' literacy, and how these relationships might be either problematic or capitalized on in school. The aim is for student teachers to appreciate the cultural and linguistic resources that students bring to class, and with this knowledge to look for ways to integrate those resources with the curriculum.

QCJ528 The Teaching of Malay Modern Literature

The aims & objectives of teaching literature and the place of literature in the curriculum. An overview of developments of modern Malay and Indonesian literature. General methods and technique of modern Malay literature via various genres – short story, novel, poetry and drama. Evaluation & testing of literature in school.

QCJ529 The Teaching of Traditional Malay Literature

Traditional Malay literature – overview of the main features and development. The knowledge and skills in the teaching of Malay prose, poetry and selected classical genres and texts. The adaptation of Malay classical texts in the teaching of Malay language as a rich source of cultural enrichment.

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, Pythagoras' Theorem, Trigonometry, Statistics and Probability.

QCM531 Teaching and Learning Mathematics II (Lower Sec)

The objectives of this course are (1) to provide student teachers with the opportunity to teach mathematics topics and practise their teaching skills, and (2) to experience the process of setting a mathematics test paper and of marking students' solutions. This course includes 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 Music

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCI522	Music and Media in the Secondary School Classroom	Core	1	-
QCI523	Curriculum Planning and Assessment in Music	Core	2	-
QCI524	Post Practicum Discussion: Summary and Conclusions	Core	1	-
*QCI525	Teaching Music as an Examination Subject	Core	1	-
#QCI526	Personal Musical Skills	Core	1	-
QCI527	Foundation Studies in Music Education: Theory and Practice	Core	2	-
QCI528	Pedagogical Methods and Music-IT Skills for Music Teaching	Core	2	-

Note: * For those offering CS1 Music only.
    # For those offering CS2 Music only.

QCI522 Music and Media in the Secondary School Classroom

This course looks at how music technology and modern-day media can be harnessed for the General Music Programme (GMP). Students will explore the educational affordances of the internet media as well as multi-media art forms such as music videos. The use of notation and sequencing software in the music classroom will also be covered.

QCI523 Curriculum Planning and Assessment in Music

This course focuses on curriculum planning, lesson planning, and assessment of learning in music as well as the management of musical co-curricular activities. Microteaching will be included.

QCI524 Post Practicum Discussion: Summary and Conclusions

This course offers an opportunity for student teachers to share their teaching experiences and discuss successful music teaching practices for a variety of educational contexts in Singapore.

Theories of music education covered in earlier courses will be reconsidered in the light of the student teachers' teaching practicum experiences.

QCI525 Teaching Music as an Examination Subject (for CS1)

This course will cover teaching approaches and specific methodologies for preparing students taking the G.C.E. "O"-level music exams (including the "Higher Music" options).

QCI526 Personal Musical Skills (for CS2)

This course covers basic vocal techniques (incorporating the Kodaly approach), basic conducting skills, and music arranging for classroom-teaching purposes.

QCI527 Foundation Studies in Music Education: Theory and Practice

Why teach music? What should we teach? And how should we teach? This foundation course explores past and present thinking in the philosophy, psychology and sociology of music education, with

specific reference to the teaching of music, including non-western musics, in the Singapore secondary classroom. Major curriculum theories and philosophies (e.g., Tyler, Bruner, and Dewey) as applied to music education will be introduced, together with the current MOE General Music Programme syllabus and relevant MOE initiatives.

QCI528 Pedagogical Methods and Music-IT Skills for Music Teaching

This course will introduce pedagogical approaches to the teaching of world music on the one hand and of the Music Syllabus for Normal Technical students on the other. The acquisition of western-style music literacy, music-IT literacy, and culturally-informed music listening/response skills will be dealt with accordingly in both these contexts.

The Teaching of Physics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCP523	Teaching of Physics I	Core	4	-
QCP524	Teaching of Physics II	Core	3	-
QCP525	Teaching of Physics III	Core	2	-

QCP523 Teaching of Physics I

The aim of this course is to develop student teachers' understanding of the physics curriculum, pedagogical models for physics teaching and instructional strategies for physics teaching. At the end of this course, student teachers are to be able to design a lesson plan that takes into account the curriculum needs, students' needs and nature of content.

In this course, student teachers will examine the components of the physics curriculum in order to understand their purpose, relevance and importance, pedagogical framework and the disciplinary content. They will also analyse the curriculum at different levels (i.e., pure physics, combined science (physics)) and for different streams (express and normal academic) to identify their similarities and differences. The notion of differentiated instruction will be introduced so that student teachers will be able to cater to the needs of different groups of students.

Different pedagogical approaches for physics teaching will be introduced and compared so that student teachers are aware of the affordances and limitations of different approaches. They will also be introduced to a repertoire of instructional strategies

that they can employ to effectively support students' physics learning.

QCP524 Teaching of Physics II

This course examines critical issues pertaining to assessment and evaluation of Physics learning. 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 course also seeks to develop student teachers' skills in development of physics tests, marking and analysing of test papers with an emphasis on how to give useful feedback to students, parents and other stakeholders.

QCP525 Teaching of Physics III

In this course, student teachers will put theories into practice. They will sharpen their teaching skills through an iterative process of Planning, Implementing and Reflecting. They will have first-hand experience on how to select and write appropriate learning objectives, and sequence their activities to ensure a coherent and continuous development of ideas or skills; selecting and developing resources (e.g. worksheets), and planning for assessing students' learning. Through teaching in simulated and real situations, student teachers are exposed to different techniques of implementing their lesson plan. Emphasis is placed on specific skills like introducing and concluding lessons, classroom discourse, techniques of explanation and questioning, engagement of

students' higher order thinking, and conducting individual and group work.

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. They will design appropriate assessment for Lower Secondary Social Studies students in the Normal (Technical) course. 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.

The Teaching of Tamil Language

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCT520	Teaching of Tamil Language I	Core	5	-
QCT521	Teaching of Tamil Language II	Core	4	-

QCT520 Teaching of Tamil Language I

Exploring the two of four different types of language skills, namely reading and writing. Developing the language proficiency of students in Singapore secondary schools. Different methods to emphasis the content of Tamil Language in curriculum. Introducing IT skills to the student teachers in order to develop them to prepare IT related lesson packages and to create the Tamil language related websites.

QCT521 Teaching of Tamil Language II

Exploring the listening and speaking skills and the introduction to various methods to teach these skills in an interesting and effective manner. Teaching of vocabulary and the functional grammar at secondary level through various teaching methods and strategies. To highlight the difference between Standard Spoken Tamil and written Tamil in order to equip the students to improve their speaking and writing skills. The importance of testing, the evaluation of the performance at the test paper, remedial activities and the place of high and low order thinking skills in testing.

The Teaching of Tamil Literature

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCJ525	Teaching of Tamil Literature I	Core	5	-
QCJ526	Teaching of Tamil Literature II	Core	4	-

QCJ525 Teaching of Tamil Literature I

An introduction to the teaching of Tamil language through the use of literature. The use of Tamil drama and various aspects of ancient, medieval and modern poetry such as explanation and presentation of dramatic situations in poems, description of images, mood and attitudes, tone, analogical language, theme and meaning. Various aspects of National Education in Tamil literature and its importance in teaching of Tamil language at secondary level. Appreciating literary works, critic. Facilitating student teachers with the various types of literary works such as poetry, and drama.

QCJ526 Teaching of Tamil Literature II

The teaching of Tamil language through the study of novels, short stories and essays. Using various kinds of Tamil short stories and novels to analyze the techniques used by writers. Integrating National Education into lessons using Tamil fictions. Using IT tools to teach the literature in an interesting and effective manner. Student teachers will be made aware of the factors that contribute to the preparation of an effective lesson plan according to students' abilities.

Practicum

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

Teaching Practicum is a very important component of the PGDE programme. Student teachers will apply their knowledge and skills for the teaching subjects they are trained in and develop their teaching competencies in a variety of instructional contexts and at different levels under the guidance and supervision of cooperating teachers, school coordinating mentors and university lecturers. They will learn from experienced school mentors about the schooling process and prepare themselves for their roles and responsibilities in teaching.

QPR520 Teaching Practice

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 assessment 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 oral and written skills necessary for effective communication as teachers in the classroom and in their professional interaction with colleagues, parents and the general public. It includes practice tasks to improve speaking and writing skills as well as exercises and group work practice in communication. Student teachers will be given practical instruction on vocal health care and vocal quality.

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.

Use of Malay in Teaching

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QLM522	Use of Malay in Teaching	Core	1	-
QLM523	Language etiquettes: Proverbs and Language Refinement in the Teaching of Malay Language	Core	1	-

QLM522 Use of Malay in Teaching

Skills in using Malay for effective oral communication – reading aloud, spontaneous dialogue, giving instructions, speech, debate – by using Sebutan Baku.

QLM523 Language Etiquettes: Proverbs and Language Refinement in the Teaching of Malay Language

Creative and effective application of Malay proverbs in the teaching of Malay language for cultural enrichment. Language etiquettes - its application in the teaching and learning of Malay language.

Use of Tamil in Teaching

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QLT520	Use of Tamil in Teaching 1	Core	1	-
QLT521	Use of Tamil in Teaching 2	Core	1	-

QLT520   Use of Tamil in Teaching 1

Development of oral proficiency in Tamil language. Phonetics to help student teachers acquire accuracy and mastery in pronunciation and other communication skills inside and outside the classroom. Written communication skills. Common errors in writing and the syntactical aspects of Tamil.

QLT521   Use of Tamil in Teaching 2

Written communication skills. Essay writing, report writing and creative writing and other communication skills that are necessary for various professional roles that teachers assume in the secondary schools. Effective ways of creating lessons and lesson plans with a view to increase the potential and highlighting a clear and effective way to maximise the student teachers' objectives.

PGDE Programme
Teaching Physical Education
at Secondary Level

Curriculum Structure

Table 9: Curriculum Structure of the PGDE (Physical Education)(Secondary) Programme

Year 1

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED021	Professional Practice and Inquiry I	0
	QED526	Teaching and Managing Learners at the Secondary/Junior College Level	2
	QED527	ICT for Meaningful Learning	2
	QED529	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED530	The Social Context of Teaching and Learning	1
	QED531	Character and Citizenship Education	1
	QED532	Assessing Learning and Performance	1
	QED533	Group Endeavours in Service Learning	1
CURRICULUM STUDIES			
Physical Education	QPC52A	Principles of Games	2
	QPC52B	Instructional Methods in Physical Education	2
	QPC52C	Badminton	2
	QPC52D	Basketball	2
	QPC52E	Fundamental Movement Skills	2
	QPC52G	Curriculum Gymnastics	2
	QPC52H	Soccer	2
	QPC52J	Outdoor Residential Camp	1
ACADEMIC SUBJECTS			
	QPA52A	Introduction to Physical Education & Sport	2
Physical Education	QPA52B	Growth and Motor Development	2
	QPA52C	Anatomical and Biomechanical Foundations of Physical Activity	3
	QPA52D	Physiology of Exercise	2
PRACTICUM			
	QPR522	Teaching Practice 1	5
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK520	Communication Skills for Teachers	2

Year 2

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED022	Professional Practice and Inquiry II	1
CURRICULUM STUDIES			
Physical Education	QPC62A	Instructional Strategies in Teaching of Physical Education	2
	QPC62B	Dance	2
	QPC62C	Softball	2
	QPC62D	Track & Field	2
	QPC62E	Fitness & Health	2
	QPC62G	Floorball	2
	QPC62H	Volleyball	2
CURRICULUM STUDIES [Select one from the list of Arts/Science Curriculum Studies subjects under PGDE (Secondary) section]			
		Arts/Science Curriculum Studies subjects*	9
ACADEMIC SUBJECTS			
Physical Education	QPA62A	Foundations of Psychology & Motor Learning in Physical Activity	3
PRACTICUM			
	QPR622	Teaching Practice 2	10

*   Student teachers assigned English Language as their Curriculum Subject (CS) are required to undertake English Language Content Enhancement (ELCE) courses. Description of ELCE is available on Page 13.

Contents of Courses

Education Studies

The courses for QED02-533 are described in Education Studies section under PGDE Programme, Teaching at Secondary Level.

Curriculum Studies

The Teaching of ….

Descriptions of courses for Arts/Science Curriculum Studies subjects are available in Curriculum Studies section under PGDE Programme, Teaching at Secondary Level.

Language Enhancement and Academic Discourse Skills

Communication Skills for Teachers

Description of course is available in Language Enhancement and Academic Discourse Skills section under PGDE Programme, Teaching at Secondary Level.

Curriculum Studies

The Teaching of Physical Education

Year	Course Code	Title	Course Category	No. of AUs	Pre-requisites
1	QPC52A	Principles of Games	Core	2	-
	QPC52B	Instructional Methods in Physical Education	Core	2	-
	QPC52C	Badminton	Core	2	* apply
	QPC52D	Basketball	Core	2	* apply
	QPC52E	Fundamental Movement Skills	Core	2	-
	QPC52G	Curriculum Gymnastics	Core	2	* apply
	QPC52H	Soccer	Core	2	* apply
	QPC52J	Outdoor Residential Camp	Core	1	-
2	QPC62A	Instructional Strategies in Teaching of Physical Education	Core	2	-
	QPC62B	Dance	Core	2	* apply
	QPC62C	Softball	Core	2	* apply
	QPC62D	Track & Field	Core	2	* apply
	QPC62E	Fitness & Health	Core	2	-
	QPC62G	Floorball	Core	2	* apply
	QPC62H	Volleyball	Core	2	* apply

* Student teachers are expected to have some basic skills BEFORE the start of the course.

Year 1

QPC52A Principles of Games

This course is designed to introduce student teachers to the concepts, theories and principles underpinning the teaching of games and to develop their pedagogical understanding in a broad spectrum of games.

They will also acquire lesson ideas, content development/progressions and teaching strategies for the teaching of invasion*, net/barrier, striking/fielding and target games suitable for use in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles/ strategies / approaches / models that develop their pupils into confident and active participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, the Games Concept Approach (GCA) and the Sport Education Model (SEP). Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (ICT) will also be introduced.

* Invasion games will be prioritized.

QPC52B Instructional Methods in Physical Education

This course is designed to provide student teachers with the opportunity to develop foundation skills of planning, teaching and evaluating school physical education in secondary schools.

Student teachers will be introduced to content selection, organisation, instructional methods, direct teaching styles, task presentation, task, time and student management systems, observation of student performance, as well as feedback provision. Course format will include lectures, discussions, practical experiences, and microteaching.

QPC52C Badminton

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in badminton and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of badminton in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into confident and active participants of the game.

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC52D Basketball

This course is designed to provide student teachers with the opportunity to develop their skills and game performance in Basketball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of Basketball in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into enthusiastic and competent participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC52E Fundamental Movement Skills

This course provides student teachers with an understanding of the concepts, principles and practices of applying the knowledge of fundamental movement to specialized sports skills within the secondary school sports / games physical education curriculum.

It provides an overview of the role of fundamental movement within the Singapore's school physical education curriculum, focusing on developing

fundamental movement proficiencies at the lower primary, application in modified games in the upper primary, and its relationship to the variety of specialised sports performance at the secondary levels. Specifically, this course will address the various manipulative, locomotor and nonlocomotor skills applied within a movement framework that helps define the qualitative and quantitative aspects of human effort in a variety of sports and physical activities.

Student teachers will have some opportunity to develop their own movement proficiency, understand relevant teaching approaches to help their secondary pupils learn and apply mature movement patterns, concepts and sport science knowledge to sports skills, acquire the competencies to observe errors in performance, and to design appropriate learning tasks and progressions, using relevant teaching cues, to help pupils improve sports performance while remediating for fundamental movement inadequacies.

QPC52G Curriculum Gymnastics

As Curriculum Gymnastics is not part of the Secondary school curriculum, the student teachers taking this elective will follow the primary course outline as a preparatory gymnastics programme.

This course will introduce curriculum gymnastics through a developmental approach that allows the participants to explore movement themes largely on floor activities, gradually progressing from simple to complex apparatus designs. More advanced floor and apparatus skills will be taught with a focus on

progression as well as safety. Emphasis will be on the cognitive and affective development of the participants through appropriate pedagogical styles of teaching suitable for secondary schools. It is anticipated that participants will complete the course with a heightened level of confidence and personal conviction for teaching gymnastics in a progressive, creative and safe manner.

QPC52H Soccer

This course is designed to provide student teachers with the opportunity to develop their skills and game performance in soccer and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of soccer in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into enthusiastic and competent participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC52J Outdoor Residential Camp

The 5- Day Outdoor Residential Camp in Outward Bound School, Singapore is a compulsory course for all Year 1 PESS student teachers. The programme will enable student teachers to understand the role of Outdoor Education in schools, MOE Risk Assessment Management System (RAMS) and facilitation of learning in an outdoor context.

The content is customized to align to MOE's emphasis on teaching values through outdoor education and NIE Graduate Teacher Competencies Framework. In this camp, student teachers will be exposed to facilitation models, adventure activities, communal living and essential outdoor skills. The latter will include camp craft, expedition planning and navigation.

Year 2

QPC62A Instructional Strategies in Teaching of Physical Education

This course, second in a series, builds on foundation pedagogical knowledge and skills appropriate for secondary school students.

It develops competence in a variety of teaching styles evolving from Mosston and Ashworth's spectrum including inquiry, problem solving, group work and peer-teaching. A concept approach to teaching games is emphasized. The focus is on planning, teaching and evaluating situationally relevant lessons.

Student teachers will be encouraged to refine their own teaching through systematic observation. Instructional strategies will include lectures, seminars, peer- and/or micro-teaching and assignments.

QPC62B Dance

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and performance in dance and acquire lesson ideas, content development / progressions and teaching strategies for the teaching of dance in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches that develop their pupils into confident and active participants of dance. These

approaches include teaching methods (problem-solving, facilitation, command style, reciprocal) and resource for the planning and instruction of folk, line (country and pop) and social dances. It also aims to give student teachers a chance to discover the creative juice in them and draw on the elements of dance to create their own dances.

Relevant Sports Science knowledge behind effective techniques, skills, and their development in dance, various dance-specific assessment as well as the use of information technology (IT) will also be introduced.

QPC62C Softball

This course is designed to provide student teachers with the opportunity to develop their techniques, skills and game performance in Softball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of Softball in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their pupils into confident and active participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of

skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC62D Track & Field

This course is designed to impart the necessary skills and knowledge to pre-service teachers to teach selected Track & Field events to youths in a secondary school setting.

Student teachers will be introduced to developmentally appropriate teaching approaches such as Teaching Games for Understanding (TGFU), Games Concept Approach (GCA), and Sport Education Model (SEP).

Relevant sport science knowledge, assessment tools, and the use of information technology will be incorporated.

QPC62E Fitness & Health

This course is designed to help student teachers acquire knowledge and skills in health, wellness and fitness so as to promote and develop a lifelong physically active and healthy lifestyle in their pupils.

Student teachers will be introduced to developmentally appropriate activities to develop various components of fitness and design safe and effective exercise programmes for their pupils.

QPC62G Floorball

This course is designed to provide student teachers with the opportunity to develop their skills and game performance in floorball and acquire lesson ideas, content development/progressions and teaching strategies for the teaching of floorball in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches/models that develop their pupils into enthusiastic and competent participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

QPC62H Volleyball

This course is designed to provide student teachers with the opportunity to develop their skills and game performance in Volleyball and acquire lesson ideas, content development / progressions and teaching strategies for the teaching of Volleyball in secondary schools.

Student teachers will be introduced to developmentally appropriate teaching styles / strategies / approaches / models that develop their

pupils into enthusiastic and competent participants of the game. These approaches include Teaching Games for Understanding (TGFU), Play Practice, Games Concept Approach (GCA) and Sport Education Model (SEP).

Relevant Sports Science knowledge behind effective techniques, skills, tactics and their development in the game, various game-specific assessment tools of skills and game performance as well as the use of information technology (IT) will also be introduced.

Academic Subjects

Physical Education

Year	Course Code	Title	Course Category	No. of AUs	Pre-requisites
1	QPA52A	Introduction to Physical Education & Sport	Core	2	-
	QPA52B	Growth & Motor Development	Core	2	-
	QPA52C	Anatomical & Biomechanical Foundations of Physical Activity	Core	3	-
	QPA52D	Physiology of Exercise	Core	2	-
2	QPA62A	Foundations of Psychology & Motor Learning in Physical Activity	Core	3	QPA52B

QPA52A Introduction to Physical Education & Sport

This course emphasizes concepts related to the broad field of physical education and sport. It provides an overview of the disciplines that study the field's philosophical, historical, cultural, and sociological foundations and their applications to professional practice.

The course examines Singapore's PE and Sports infrastructure and their relationships in promoting participation in sports from recreational to high performance levels. The daily work in physical education and sport, looking at the traditional field of teaching and coaching, is also highlighted. Current issues and future directions in the field are also explored and discussed.

QPA52B Growth & Motor Development

This purpose of this course is to study physical growth and motor development, with particular emphasis during the growing years. Factors influencing physical growth and motor development, age-related changes, individual, gender-related and maturity-associated variations in growth and development and variations during pubertal growth period will be discussed. Modelling the principles and the processes underlying growth and motor development through physical activities in teaching physical education will also be discussed.

QPA52C Anatomical & Biomechanical Foundations of Physical Activity

This course enables student teachers to relate human anatomy to physical activities and to apply the principles of biomechanics to the teaching of physical skills.

Structural anatomy deals with the knowledge and an understanding of the bones, joints and muscle structure that produces movement. Biomechanics is the study of a biological system by means of mechanics.

This course introduces the basic mechanical concepts and principles that govern human movement. At the end of the course, student teachers will be expected to perform basic qualitative analysis of physical activities using basic concepts of mechanics and anatomy. This course would also provide a brief introduction to quantitative analysis of physical activities.

QPA52D Physiology of Exercise

The purpose of this course is to equip student teachers in PE with an understanding of fundamental human and exercise physiology so as to enable them to design safe and effective lessons or training for 1) students during PE lessons and 2) student athletes gearing for sports performance.

A lecture and laboratory based foundation course in exercise physiology for student teachers in Physical Education (PE). The principal areas covered include the energy metabolism for exercise, aerobic performance and anaerobic performance, sex and age-associated differences in exercise performances and thermoregulation in the heat. The associated teaching implications will be brought to the fore. In addition, aspects of functional anatomy dealing with the various systems of the body and the part each plays in physical performance, health and fitness will be discussed in this course.

QPA62A Foundations of Psychology & Motor Learning in Physical Activity

This is an introductory course on sport and exercise psychology as well as motor learning. Specifically, the course will focus on topics and issues related to the social psychological variables that influence participation in physical activities, the environments in which sport and exercise participants operate, and selected outcomes of such participation. This course also introduces student teachers to some of the theories and practices associated with skill acquisition. The focus is specifically on how the individual develops, learns and performs motor skills.

Student teachers will be introduced to these major concepts through a series of lectures, readings, and laboratory exercises.

Practicum

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QPR522	Teaching Practice 1	Core	5	-
QPR622	Teaching Practice 2	Core	10	TP1

Teaching Practicum is a very important component of the PGDE programme. Student teachers will apply their knowledge and skills for the teaching subjects they are trained in and develop their teaching competencies in a variety of instructional contexts and at different levels under the guidance and supervision of cooperating teachers, school coordinating mentors and university lecturers. They will learn from experienced school mentors about the schooling process and prepare themselves for their roles and responsibilities in teaching.

The Practicum is developmental in nature. It comprises two school attachment periods, i.e., Teaching Practice 1 (TP1), and Teaching Practice 2 (TP2).

QPR522   Teaching Practice 1

The 5-week Teaching Practice 1 is to help the student teachers begin to learn to teach independently. They will be provided opportunities to observe their CTs' lessons. Eventually they will learn to plan their own lessons to teach, prepare the relevant resources and manage pupils independently, in consultation with their CTs.

QPR622   Teaching Practice 2

In this 10-week Teaching Practice 2, 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 assessment 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.

PGDE Programme
Teaching at Junior College Level

Curriculum Structure

Table 10: Curriculum Structure of the PGDE (Junior College) (General) Programme

Category/ Subject	Course Code	Title	No. of AUs
EDUCATION STUDIES			
	QED021	Professional Practice and Inquiry I	0
	QED022	Professional Practice and Inquiry II	1
	QED526	Teaching and Managing Learners at the Secondary/Junior College Level	2
	QED527	ICT for Meaningful Learning	2
	QED529	Educational Psychology: Theories and Applications for Learning and Teaching	1
	QED530	The Social Context of Teaching and Learning	1
	QED531	Character and Citizenship Education	1
	QED532	Assessing Learning and Performance	1
	QED533	Group Endeavours in Service Learning	1
CURRICULUM STUDIES – JUNIOR COLLEGE (Any one as assigned) ^			
	QCB	The Teaching of Biology	6
	QCY	The Teaching of Chemistry	6
	QCO	The Teaching of Economics	9
	QGP	The Teaching of General Paper	9
	QCG	The Teaching of Geography	6
	QCH	The Teaching of History	6
	QCM	The Teaching of Mathematics	6
	QCP	The Teaching of Physics	6
CURRICULUM STUDIES – SECONDARY (Any one as assigned)			
	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
	QCI	The Teaching of Music	9
	QCP	The Teaching of Physics	9
	QCL	The Teaching of Social Studies	9

Category/ Subject	Course Code	Title	No. of AUs
KNOWLEDGE SKILLS			
	QKS521	Knowledge Skills: Critical Literacy Skills	1
	QKS522	Knowledge Skills: Project Work	1
	QKS523	Knowledge Skills: Multidimensional Thinking Skills	1
PRACTICUM			
	QPR540	Teaching Practice	10
LANGUAGE ENHANCEMENT AND ACADEMIC DISCOURSE SKILLS			
	QLK520	Communication Skills for Teachers	2

*   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 on Page 13.

^   The Junior College teaching subject must be aligned to the Secondary teaching subject with the exception of Economics and General Paper.

Contents of Core Courses

Education Studies

The courses for QED021-533 are described in Education Studies section under PGDE Programme, Teaching at Secondary Level.

Curriculum Studies (Secondary)

The Teaching of ….

Descriptions of courses for Secondary Curriculum Studies subjects are available in Curriculum Studies section under PGDE Programme, Teaching at Secondary Level.

Language Enhancement and Academic Discourse Skills

Communication Skills for Teachers

Description of course is available in Language Enhancement and Academic Discourse Skills section under PGDE Programme, Teaching at Secondary Level.

Curriculum Studies

The Teaching of Biology

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCB540	The Teaching of A-level Biology I	Core	3	-
QCB541	The Teaching of A-level Biology II	Core	3	-

QCB540 The Teaching of A-level Biology I

Student teachers will learn how to conduct investigative case based learning which involves planning investigations, collecting data, analyzing data, presenting data, and preparing scientific posters. The course will examine the A-level Biology curriculum, and cover the pedagogical content knowledge required by the A-level Biology syllabus. Student teachers will be required to prepare and present instructional packages for selected A-level Biology topics.

QCB541 The Teaching of A-level Biology II

The course includes microteaching which provides student teachers with opportunities to identify and practise basic teaching skills such as opening and closing a lesson, explaining concepts and questioning. The microteaching presentations will be reviewed and critiqued by peers and the tutor. Student teachers will also learn how to design and perform tasks for A-level practical assessment. In addition, student teachers will also learn how to incorporate critical thinking through crafting questions aligned to the A-level syllabus.

The Teaching of Chemistry

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCY540	The Teaching of A-level Chemistry I	Core	3	-
QCY541	The Teaching of A-level Chemistry II	Core	3	-

QCY540 The Teaching of A-level Chemistry I

The course will examine the A-level chemistry curriculum, and covers issues and practices related to the pedagogical content knowledge required by teachers implementing the A-level chemistry curriculum. The course will also focus on the issues and challenges related to written assessment, school-based practical assessment and alternative assessments, and on the integration of ICT in teaching and learning at the A-level.

QCY541 The Teaching of A-level Chemistry II

The course will incorporate discussions on the teaching of difficult A-level chemistry topics as well as microteaching sessions to provide student teachers opportunities to practise teaching skills related to mass lectures, small group tutorials and practical work, peer evaluation and self-reflection.

The Teaching of Economics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCO540	Further Instructional Approaches and Assessment of A-Level Economics	Core	3	-
QCO541	Pedagogical Approaches to Teaching and Learning Economics	Core	4	-
QCO543	Disciplinarity and the Economics Curriculum	Core	2	-

QCO540 Further Instructional Approaches and Assessment of A-Level Economics

This course aims to equip student teachers with assessment literacy and pedagogical skills to prepare their students for the assessment of 'A' level Economics examinations. Student teachers will learn the assessment objectives and format used in the examinations, the skills to craft examination questions and marking schemes, grade students' scripts, identify strengths and weaknesses from their scripts and give feedback to students on their performance and areas for improvement. Student teachers will also examine and practise teaching strategies for guiding students in essay writing and answering case study questions.

QCO541 Pedagogical Approaches to Teaching and Learning Economics

This course aims to groom student teachers to become educational professionals with reflective skills, thinking dispositions and pedagogical skills for teaching 'A' level Economics in Singapore junior colleges. Student teachers will imbibe the principles of engaged learning use these in lesson planning and

implementation so that their students will in turn learn purposefully, develop deep understanding of subject knowledge and acquire the facility to use the tools of economic analysis to make connections with the real world outside the classroom. There are three main sections: pedagogy, lesson planning and micro-teaching. This course will lay a foundation for further pedagogical approaches in Economics teaching.

QCO543 Disciplinarity and the Economics Curriculum

This course aims to take student teachers through a brief history of economic thought and provide opportunities for examining of the tools of economic analysis in the teaching of economics. The content of the GCE 'A' level syllabus will also be discussed and unpacked to enable student teachers to teach the subject more meaningfully.

The Teaching of General Paper

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QGP540	Aims and Approaches to the Teaching of General Paper	Core	6	-
QGP541	Experiences in the Teaching of General Paper	Core	3	-

QGP540 Aims and Approaches to the Teaching of General Paper

This course examines (a) key approaches and strategies for teaching critical reading, writing, speaking and listening skills, (b) key approaches and strategies for facilitating discussion, and (c) skills for developing teaching resources which cover a broad range of topics. Included in the study are key issues and challenges related to the teaching of the General Paper. The course will be conducted mainly through seminar-style tutorials which involve presentation on readings, break-out sessions for group discussions, hands-on lesson plans and resource development sessions, and peer critique. Formal assessment will provide opportunities for student teachers to connect theory with practice, plan and develop lesson ideas, and reflect on teaching practices. An integrated and holistic approach is taken so that the approaches and strategies for teaching all the key skills in reading, writing and thinking are examined concurrently with discussions on content development and assessment.

QGP541 Experiences in the Teaching of General Paper

This course presents student teachers with an opportunity to enhance their practical teaching skills in General Paper. Conducted through tutorial sessions, student teachers will analyse a problem scenario in the teaching of General Paper, design a lesson unit in groups to address the problem and critically reflect on their learning from this process. Formal assessment will provide student teachers with the opportunity to consolidate their learning from the course in preparation for their Teaching Practice through think-piece essays, and learn practical and effective teaching strategies for problem-solving through the unit planning process.

The Teaching of Geography

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCG540	Exploring Themes in "A" level Geography	Core	4	-
QCG541	Teaching and Learning in "A" level Geography	Core	2	-

QCG540 Exploring Themes in "A" level Geography

This course deepens the student teacher's conceptual understanding of Geography based on the themes in the "A" levels Geography syllabus. The students will critically explore the themes in both Physical and Human Geography. This in-depth exploration and analysis of the themes will provide the scope and context for the teaching and learning of Geography at "A" levels.

QCG541 Teaching and Learning in "A" level Geography

The aim of this course is to provide student teachers with the relevant frameworks for designing and teaching a meaningful and purposeful geography curriculum at "A" levels. Student teachers will explore the diversity of instructional approaches that can be used to teach geographical content in a way that supports learning. They will also inquire into formative assessment as part of their curricular and lesson design.

The Teaching of History

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCH540	Teaching & Learning History for A-Level Students	Core	4	-
QCH541	Assessment and Evaluation of History at the A-Levels	Core	2	-

QCH540 Teaching & Learning History for A-Level Students

This course is aimed at introducing student teachers to the teaching and learning of History at the JC-level, and to raise their awareness on the challenges of teaching history to A-level students. The course plans to build upon the pedagogical knowledge and disciplinary understandings that student teachers would have acquired while undergoing a concurrent course on the teaching and learning of History and Social Studies at the secondary school level, to better meet the learning needs of students taking A-level history. The course will give student teachers an insight into the nature and objectives of teaching A-level History, as well as allowing them to explore ways to enhance students' learning experiences through historical inquiry. This course is designed to equip student teachers not only with the pedagogical understanding of teaching A-level History but also with the necessary strategies that would enable them to cultivate (in their students) a predisposition to explore, interpret and understand the past, as part of learning to think historically.

QCH541 Assessment and Evaluation of History at the A-Levels

This course seeks to expose student teachers to key issues involved in the assessment and evaluation of history at the A-levels. Generally, the course aims at enabling student teachers to conduct assessment in the subject, with attention given to the practical aspects of how to assess what students have learnt from being taught A-level History. In line with the objectives and examination requirements of the current syllabus, the main emphasis of the course will be on the ways source materials can be used to meet assessment demands of the two papers on offer for examination at the GCE A Levels. For this purpose, the course has been designed to give student teachers ample opportunities at setting source-based and other theme-based essay questions, as well as giving them adequate practice at both devising marking schemes and the marking of answer scripts. Student teachers will also be exposed to the technical aspects of writing an argumentative history essay, and will be involved in formulating possible strategies aimed at improving students' history essay-writing skills.

The Teaching of Mathematics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCM540	Teaching and Learning of A-Level Mathematics	Core	6	-

QCM540 Teaching and Learning of A-Level Mathematics

The main objective of this course is to equip student teachers with a working knowledge of teaching principles, an understanding of the theories of learning that inform instruction, and a comprehensive knowledge of the mathematics curriculum at A-level. The content of this course includes: curriculum for H1, H2 and H3 mathematics; planning lectures and tutorials in A-level mathematics; role of ICT and use of graphing calculators in mathematics teaching and learning; teaching of A-Level mathematics topics such as Algebra, Calculus, Vectors, Complex Numbers, and Probability and Statistics.

The Teaching of Physics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QCP540	The Teaching of A-level Physics I	Core	3	-
QCP541	The Teaching of A-level Physics II	Core	3	-

QCP540 Teaching of A-level Physics I

This course focuses on the pedagogy and lesson planning for A-level physics. The course will examine the A-level physics curriculum in Singapore schools, and identify common students' learning difficulties and conceptions in understanding physics at a higher educational level. It will explore different teaching and learning strategies, including the use of ICT, to develop students' understanding in large and small group settings. This course also provides student teachers with the opportunity to practice the relevant skills in conducting lectures and tutorials.

QCP541 Teaching of A-level Physics II

This course focuses on assessment and evaluation issues, and laboratory work in A-level physics. It explores different modes of assessment to evaluate students' understanding and covers the setting and marking of A-level physics tests. The course also deals with the design and management of laboratory work to engage students in scientific theories and principles. Laboratory work in the context of school-based assessment will also be examined.

Knowledge Skills

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QKS521	Knowledge Skills: Critical Literacy Skills	Core	1	-
OKS522	Knowledge Skills: Project Work	Core	1	-
OKS523	Knowledge Skills: Multidimensional Thinking Skills	Core	1	-

QKS521 Knowledge Skills: Critical Literacy Skills

This course is aimed at equipping student teachers with the theoretical knowledge and pedagogical practice of critical literacy skills at the pre-university level. It adopts an integrated approach which balances theory, practice and application in the wider context of a changing and dynamic curriculum with the implementation of the revised curriculum by the Ministry of Education at the pre-university level. It is designed to provide student teachers with a broad perspective of models and approaches to critical literacy, and in integrating critical thinking, questioning, facilitation and discussion skills into the pre-university curriculum using a range of approaches. It encourages exploration, critique and adaptation of pedagogic resources and approaches directed by current national initiatives and trends in pedagogy with the aim of developing classroom practitioners who are self-reflective, informed, innovative, conscious and confident of themselves as critical thinkers, writers and facilitators of learning at the pre-university level.

QKS522 Knowledge Skills: Project Work

This course will provide student teachers with opportunities to explore the educational potential of Project Work (PW) as a curricular form and pedagogy in the context of curricular initiatives to prepare learners for the 21st century.

Focusing on the Pre-University H1 PW syllabus as an example of how the Singapore education system has re-designed its curriculum to emphasise 21st century competencies like interdisciplinary thinking, self-directed learning and collaboration, student teachers will be encouraged to develop critical insights on the rationale, learning processes and educational potential of the PW curriculum. The course will also introduce the assessment of PW and explore tools for PW facilitation.

Student teachers will have opportunities to construct insights on how they can facilitate PW meaningfully, drawing on past experiences with PW as well as lived experiences of PW from students and teachers involved in recent enactments of the Pre-University PW curriculum.

QKS523 Knowledge Skills: Multidimensional Thinking Skills

Education today aims to prepare students to deal intelligently and creatively with an increasingly complex and dynamic world. JC education in particular seeks to prepare future leaders with the desire and ability to address and resolve serious issues confronting society. Real world situations often require solutions and strategies that cut across various domains of knowledge, thought, and practice

team work and other collaborative skills are needed to reconcile or balance competing ways of knowing, thinking and doing. This course is designed with a view to addressing these pedagogical challenges for the new JC teacher. It aims to give them a basic understanding of the four main forms of thinking – critical, creative, interdisciplinary thinking, as well as ethical reasoning – and their interrelations in the understanding of real world problems and their possible resolutions. The course is designed to engage students in the critical reflection of their group based activities in the design and delivery of education projects that would expand the creative as well as moral and intellectual horizons of the JC student.

Practicum

Course Code	Title	Course Category	No. of AUs	Pre-requisites
QPR540	Teaching Practice	Core	10	-

Teaching Practicum is a very important component of the PGDE programme. Student teachers will apply their knowledge and skills for the teaching subjects they are trained in and develop their teaching competencies in a variety of instructional contexts and at different levels under the guidance and supervision of cooperating teachers, school coordinating mentors and university lecturers. They will learn from experienced school mentors about the schooling process and prepare themselves for their roles and responsibilities in teaching.

QPR540 Teaching Practice

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 assessment 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.