

# **POSTGRADUATE DIPLOMA IN EDUCATION**

**JAN-DEC 2003**

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ISSN 0218-3196

Dec 2002

## ENQUIRIES

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or visit the NIE homepage at:

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

Because of the large number of candidates seeking admission, it is regretted that no telephone or personal enquiries will be entertained.

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

## GENERAL INFORMATION

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## INTRODUCTION

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The National Institute of Education is offering a special intake of postgraduate teacher-training programme leading to the award of the Postgraduate Diploma in Education (PGDE) of the Nanyang Technological University. The one-year full-time programme beginning in January 2003 provides for some degree of specialisation in secondary school teaching.

### **Aims of PGDE Programme**

The programme seeks to train university graduates to become teachers in secondary schools. It aims to prepare teachers who are well-informed, competent and thinking professionals. Such 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. They will be able to discharge competently their teaching responsibilities in a variety of classroom and school contexts in a professional and committed manner. They will also be committed to continual improvement and lifelong learning.

The PGDE programme is designed to prepare trainee teachers to:

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

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

### **Duration of Programme**

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

## **The Academic Unit System**

The Institute adopts the Academic Unit System, that is, 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 trainee teacher's academic workload related to both class attendance and independent preparation. Used to weight modules 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 subject with one lecture hour per week and one tutorial hour per week carries 2 AUs. Academic Units are calculated on a modular basis, that is, subjects are made up of modules and each module carries a certain number of AUs.



## Academic Calendar

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

| Programme/Course              | Dates of Semester/<br>Recess (R) / Vacation (V)   | Dates of Written<br>Examination   | Dates of Practicum  |
|-------------------------------|---|---|---|
| PGDE (S) (Jan 2003<br>Intake) | 6 Jan 03 – 31 May 03<br>R: 22 Feb 03 – 2 Mar 03<br>V: 1 Jun 03 – 13 July 03<br><br>14 Jul 03 – 15 Nov 03<br>R: 6 Sep 03 – 13 Sep 03 | -<br><br>(Compulsory Enrichment<br>Programme will be held from<br>26 Oct 03 to 15 Nov 03) | 6 Jan 03 – 21 Feb 03<br>(School Experience for<br>PGDE Jan 2003 Intake)<br><br>14 Jul 03 – 5 Sep 03 |

\*Recess falling within the Practicum period will follow the schools' one-week break in March

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## APPLICATIONS

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Application for admission to this special intake of the Postgraduate Diploma in Education must be submitted on-line through the Ministry of Education website at <http://www1.moe.edu.sg/teach>. The programme commences in January. Although applications are accepted throughout the year, it is advisable to submit applications early to be considered for admission.

### **Entry Requirements for the PGDE Programme**

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

For specialising in teaching Design and Technology at secondary school level, the degree must be in Mechanical Engineering, Chemical Engineering, Electrical Engineering or Civil Engineering.

For specialising in teaching Music at secondary school level, applicants who are shortlisted will be required to give a five-minute audition prior to the interview. 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.

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

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

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## **EXAMINATIONS, ASSESSMENT OF COURSEWORK & PRACTICUM**

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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. Clause 6(a) of the Examination Statute empowers the Dean to exclude a candidate from a university examination if he/she has not attended the course leading to the examination to the Dean's satisfaction. No special examination will be held for trainee 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.

Trainee teachers must complete satisfactorily all the modules they are required to take before qualifying for the award of the Postgraduate Diploma in Education (Secondary). Trainee teachers are responsible for ensuring that they register for all the modules and examinations necessary to fulfil the requirements of their course of study. Under normal circumstances, no candidate will be permitted to take more than two years to complete the programme of study and pass the examination for the Postgraduate Diploma in Education.

## Grading System

Except for the Practicum, the following grading system is adopted:

|   |   |               |
|---|---|---------------|
| A | - | Excellent     |
| B | - | Very Good     |
| C | - | Good          |
| D | - | Pass          |
| E | - | Marginal Fail |
| F | - | Fail          |

For the Practicum, the following grading system is used:

|      |   |             |
|------|---|-------------|
| Dist | - | Distinction |
| Cr   | - | Credit      |
| P    | - | Pass        |
| F    | - | Fail        |

No academic unit is earned for grades 'E' or 'F'. A trainee teacher is not permitted to offer a module that has a pre-requisite unless he has obtained a minimum of grade 'E' in the pre-requisite module.

A trainee teacher who obtains 'E' or 'F' for any module that is a pre-requisite for a higher level module must repeat the failed module on the next occasion it is offered.

A trainee teacher who obtains 'E' for a module but passes the higher level module for which it is a pre-requisite, will not be allowed to proceed to the next higher level of the module until he passes the basic pre-requisite module.

Each module attempted will be awarded a grade and recorded in the transcript. The grades for all attempts will appear in the transcript.

## **Academic Warning, Probation and Dismissal**

- (i) A trainee teacher will be given an academic warning if he obtains more than 40% but less than 50% of the total number of AUs he takes in a semester.
- (ii) A trainee teacher will be placed on academic probation if:
  - a) he fails to restore himself to good standing in the consecutive semester following the issue of an academic warning, or
  - b) he obtains less than 40% of the total number of AUs he takes in a semester.
- (iii) A trainee teacher will be refused re-admission to his course of study if he is placed on academic probation for two consecutive semesters and fails to restore himself to good standing in the following semester.
- (iv) To be restored to good standing, a trainee teacher on academic warning or probation must obtain at least 50% of the total number of AUs he takes in the following semester.
- (v) The rules on warning, probation and dismissal will also apply to a trainee teacher on leave of absence. The academic status of such a trainee teacher prior to his leave will be counted towards dismissal if he fails to restore himself to good standing when he resumes his study.

(vi) The processes are summarised in the table below:

| <b>SEMESTER</b>          | <b>% OF TOTAL AUs OFFERED</b> | <b>ACADEMIC STATUS</b>           |
|--------------------------|-------------------------------|----------------------------------|
| <b>Situation A</b>       |                               |                                  |
| Original semester        | Between 40 and 49             | Academic Warning                 |
| 2nd consecutive semester | Less than 50                  | Academic Probation               |
| 3rd consecutive semester | Less than 50                  | Academic Probation               |
| 4th consecutive          | Less than 50                  | Dismissal (Refused re-admission) |
|                          |                               |                                  |
| Original semester        | Less than 40                  | Academic Probation               |
| 2nd consecutive semester | Less than 50                  | Academic Probation               |
| 3rd consecutive          | Less than 50                  | Dismissal (Refused re-admission) |

### **Talks, Seminars, Workshops and Other Activities**

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

## **ACADEMIC STRUCTURE OF PROGRAMME**

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## STRUCTURE OF PGDE PROGRAMME

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### **Core Modules & Prescribed Electives**

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

*Core Modules* : Compulsory modules that must be passed to fulfil programme requirements;

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



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

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

| Programme | Specialisation Section                  | Year of Study | Core Subject, Prescribed Electives & Practicum | Total# |
|-----------|---|---------------|--|--------|
| PGDE      | Secondary                               | 1             | 26   | 26     |
|           | Teaching of CL/ML/TL at Secondary Level | 1             | 28   | 28     |

*#The number of AUs listed in the table gives the minimum number of AUs required for graduation in each programme. The actual number of AUs for graduation for each student depends on the subject combinations offered.*

## Contents of Programme

The contents of the Postgraduate Diploma in Education programme comprise four main areas of study:

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

## Education Studies

This category of study is compulsory and should be taken by all trainee teachers.

## **Curriculum Studies**

Trainee teachers under the **PGDE programme specialising in Secondary School Teaching** will be assigned two Curriculum Studies subjects by the Ministry of Education (MOE).

Trainee teachers under the **PGDE programme specialising in Teaching of Chinese, Malay or Tamil Language at the Secondary level** will have the following Curriculum Studies subjects:

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

## **Practicum**

This group of modules is compulsory and is to be taken by all trainee teachers.

## **Language Enrichment & Academic Discourse Skills (LEADS)**

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

**PGDE PROGRAMME SPECIALISING IN SECONDARY  
SCHOOL TEACHING**

## CURRICULUM STRUCTURE

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

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

| Category/<br>Subject           | Module<br>Code | Title  | No. of<br>AUs |
|--------------------------------|----------------|--|---------------|
| <b>EDUCATION STUDIES</b>       |                |  |               |
|                                | PED513         | Instructional Technology   | 2             |
|                                | PED514         | Social Context of Teaching and Learning                            | 2             |
|                                | PED515         | The Psychology of Pupil Development and the Learning Process       | 2             |
|                                | PED516         | Teaching and Classroom Management                                  | 2             |
| <b>EDUCATION STUDIES (Co-)</b> |                |  |               |
|                                | PED551         | Assessment for Effective Learning                                  | 2             |
|                                | PED552         | Guidance and Counselling in Secondary Schools                      | 2             |
|                                | PED553         | Teaching Pupils with Behavioural and Learning Problems             | 2             |
|                                | PED554         | Instructional Design and Computer-based Learning                   | 2             |
|                                | PED558         | The Psychology of Learning and Motivation                          | 2             |
|                                | PED559         | Classroom Management and Discipline                                | 2             |
|                                | PED560         | Strategies for Effective Thinking and Learning                     | 2             |
|                                | PED561         | Using Pupil Learning Style to Maximise Instructional Effectiveness | 2             |
|                                | PED562         | Classroom Planning to Enhance Pupil Learning                       | 2             |
|                                | PED563         | Understanding and Helping Gifted and Talented Pupils               | 2             |
|                                | PED565         | Understanding and Teaching Creative and Critical Thinking          | 2             |
|                                | PED566         | Motivating Pupils for Learning and Thinking                        | 2             |
|                                | PED567         | Assessment to Promote Thinking in Secondary Schools                | 2             |

cont'd

| Category/<br>Subject                                   | Module<br>Code | Title  | No. of<br>AUs |
|--|----------------|--|---------------|
| <b>EDUCATION STUDIES (cont'd)</b>                      |                |  |               |
|  | PED569         | Developing Creativity in the Secondary Classroom   | 2             |
|  | PED570         | Understanding Social Behaviour of Secondary School Students                                  | 2             |
|  | PED571         | Advanced Social and Educational Measurement  | 2             |
|  | PED572         | Instructional Strategies and Learning Effectiveness  | 2             |
|  | PED574         | Handling Crises  | 2             |
|  | PED575         | Computer Applications in Educational Assessment  | 2             |
|  | PED576         | Motivating Students to Learn and Think   | 2             |
|  | PED577         | Achieving the Desired Outcomes of Education through Project Work in Secondary Schools        | 2             |
|  | PED578         | Using IT for Teaching and Assessment   | 2             |
|  | PED579         | Facilitating Sexuality Education in Secondary Schools  | 2             |
|  | PED580         | Constructive Learning with the Internet  | 2             |
|  | PED581         | What it means to be a Teacher  | 2             |
|  | PED582         | Creating Constructivist Activities with ICT  | 2             |
|  | PED583         | Schooling in Meritocratic Societies  | 2             |
|  | PED584         | How Schools Really Works   | 2             |
|  | PED585         | Moral Education Across the Curriculum  | 2             |
|  | PED586         | A New Learning Paradigm for Schools: The Learning Organisation (LO) Approach                 | 2             |
|  | PED587         | Rebels with a Cause!   | 2             |
|  | PED588         | Investing in Social Capital: Building Effective Relationships with Educational Stakeholders. | 2             |
|  | PED589         | Surviving and Thriving as a Beginning Teacher  | 2             |
| <b>CURRICULUM STUDIES (Any two as assigned by MOE)</b> |                |  |               |
|  | PCK            | The Teaching of Accounting   | 8             |
|  | PCA            | The Teaching of Art  | 8             |
|  | PCB            | The Teaching of Biology  | 8             |
|  | PCY            | The Teaching of Chemistry  | 8             |
|  | PCQ            | The Teaching of Computer Applications  | 8             |
|  | PCN            | The Teaching of Design and Technology  | 8             |
|  | PCO            | The Teaching of Economics  | 8             |
|  | POA            | The Teaching of Elements of Office Administration  | 8             |
|  | PCE            | The Teaching of English Language   | 8+2           |
|  | PCG            | The Teaching of Geography  | 8             |

cont'd

| Category/<br>Subject       | Module<br>Code | Title  | No. of<br>AUs |
|----------------------------|----------------|--|---------------|
|                            | PCW            | Guidance & Counselling                             | 8             |
|                            | PCH            | The Teaching of History                            | 8             |
|                            | PCX            | The Teaching of Home Economics                     | 8             |
|                            | PCR            | The Teaching of Lower Secondary English Literature | 8             |
|                            | PCG            | The Teaching of Lower Secondary Geography          | 10            |
|                            | PCH            | The Teaching of Lower Secondary History            | 10            |
|                            | PCM            | The Teaching of Lower Secondary Mathematics        | 8             |
|                            | PCD            | The Teaching of Malay Language                     | 8             |
|                            | PCM            | The Teaching of Mathematics                        | 8             |
|                            | PCI            | The Teaching of Music                              | 8             |
|                            | PCP            | The Teaching of Physics                            | 8             |
|                            | PCT            | The Teaching of Tamil Language                     | 8             |
|                            |                |  |               |
|                            | PPR511❖        | Practicum  | 0             |
|                            |                |  |               |
| Use of English in Teaching | PCU511☒        | Use of English in Teaching                         | 0             |
| Use of Malay in Teaching   | PCU516+        | Use of Malay in Teaching 1                         | 1             |
|                            | PCU517+        | Use of Malay in Teaching 2                         | 1             |
| Use of Tamil in Teaching   | PCU518++       | Use of Tamil in Teaching 1                         | 1             |
|                            | PCU519++       | Use of Tamil in Teaching 2                         | 1             |

- ❖ Although the Practicum carries zero AUs, a trainee teacher must pass the Practicum before he/she can be awarded the PGDE.
- ☒ This module is offered on a Pass/Fail basis. A Pass is required in order to fulfil the programme requirements.
- + In addition to the Use of English in Teaching, trainee teachers doing the Teaching of Malay Language as their second CS subject must do Use of Malay in Teaching.
- ++ In addition to the Use of English in Teaching, trainee teachers doing the Teaching of Tamil Language as their second CS subject must do Use of Tamil in Teaching

**Table 3 : Curriculum Structure of the PGDE (Teaching of CL/ML/TL at Secondary Level) Programme**

| Category/<br>Subject | Module<br>Code | Title  | No. of<br>AUs |
|----------------------|----------------|--|---------------|
|                      | PED513         | Instructional Technology   | 2             |
|                      | PED514         | Social Context of Teaching and Learning                            | 2             |
|                      | PED515         | The Psychology of Pupil Development and the Learning Process       | 2             |
|                      | PED516         | Teaching and Classroom Management                                  | 2             |
|                      | PED551         | Assessment for Effective Learning                                  | 2             |
|                      | PED552         | Guidance and Counselling in Secondary Schools                      | 2             |
|                      | PED553         | Teaching Pupils with Behavioural and Learning Problems             | 2             |
|                      | PED554         | Instructional Design and Computer-based Learning                   | 2             |
|                      | PED558         | The Psychology of Learning and Motivation                          | 2             |
|                      | PED559         | Classroom Management and Discipline                                | 2             |
|                      | PED560         | Strategies for Effective Thinking and Learning                     | 2             |
|                      | PED561         | Using Pupil Learning Style to Maximise Instructional Effectiveness | 2             |
|                      | PED562         | Classroom Planning to Enhance Pupil Learning                       | 2             |
|                      | PED563         | Understanding and Helping Gifted and Talented Pupils               | 2             |
|                      | PED565         | Understanding and Teaching Creative and Critical Thinking          | 2             |
|                      | PED566         | Motivating Pupils for Learning and Thinking                        | 2             |
|                      | PED567         | Assessment to Promote Thinking in Secondary Schools                | 2             |
|                      | PED569         | Developing Creativity in the Secondary Classroom                   | 2             |
|                      | PED570         | Understanding Social Behaviour of Secondary School Students        | 2             |
|                      | PED571         | Advanced Social and Educational Measurement                        | 2             |
|                      | PED572         | Instructional Strategies and Learning Effectiveness                | 2             |

cont'd

| Category/<br>Subject  | Module<br>Code | Title  | No. of<br>AUs |
|---|----------------|--|---------------|
|   | PED574         | Handling Crises  | 2             |
|   | PED575         | Computer Applications in Educational Assessment  | 2             |
|   | PED576         | Motivating Students to Learn and Think   | 2             |
|   | PED577         | Achieving the Desired Outcomes of Education through Project Work in Secondary Schools        | 2             |
|   | PED578         | Using IT for Teaching and Assessment   | 2             |
|   | PED579         | Facilitating Sexuality Education in Secondary Schools  | 2             |
|   | PED580         | Constructive Learning with the Internet  | 2             |
|   | PED581         | What it means to be a Teacher  | 2             |
|   | PED582         | Creating Constructivist Activities with ICT  | 2             |
|   | PED583         | Schooling in Meritocratic Societies  | 2             |
|   | PED584         | How Schools Really Works   | 2             |
|   | PED585         | Moral Education Across the Curriculum  | 2             |
|   | PED586         | A New Learning Paradigm for Schools: The Learning Organisation (LO) Approach                 | 2             |
|   | PED587         | Rebels with a Cause!   | 2             |
|   | PED588         | Investing in Social Capital: Building Effective Relationships with Educational Stakeholders. | 2             |
|   | PED589         | Surviving and Thriving as a Beginning Teacher  | 2             |
| <b>CURRICULUM STUDIES (Select either Chinese, Malay or Tamil Language)</b>          |                |  |               |
| Chinese Language  | PCC511         | Teaching of Chinese Language 1   | 5             |
|   | PCC512         | Teaching of Chinese Language 2   | 3             |
| Malay Language  | PCD510         | Teaching of Malay Language 1   | 5             |
|   | PCD511         | Teaching of Malay Language 2   | 3             |
| Tamil Language  | PCT511         | Teaching of Tamil Language 1   | 5             |
|   | PCT512         | Teaching of Tamil Language 2   | 3             |
| <b>CURRICULUM STUDIES (Select the same language as in first Curriculum Studies)</b> |                |  |               |
| Chinese Literature  | PCJ511         | Teaching of Chinese Literature 1   | 6             |
|   | PCJ512         | Teaching of Chinese Literature 2   | 2             |
| Malay Literature  | PCJ513         | Teaching of Malay Literature 1   | 6             |
|   | PCJ514         | Teaching of Malay Literature 2   | 2             |
| Tamil Literature  | PCJ515         | Teaching of Tamil Literature 1   | 5             |
|   | PCJ516         | Teaching of Tamil Literature 2   | 3             |
| <b>PRACTICUM</b>  |                |  |               |
|   | PPR511❖        | Practicum  | 0             |



cont'd

| Category/<br>Subject  | Module Code | Title                        | No. of AUs |
|---|-------------|------------------------------|------------|
| <b>LANGUAGE ENRICHMENT AND ACADEMIC DISCOURSE SKILLS (Select the language as in first Curriculum Studies)</b> |             |                              |            |
| Use of Chinese<br>in Teaching   | PCU514      | Use of Chinese in Teaching 1 | 1          |
|   | PCU515      | Use of Chinese in Teaching 2 | 1          |
| Use of Malay<br>in Teaching   | PCU516      | Use of Malay in Teaching 1   | 1          |
|   | PCU517      | Use of Malay in Teaching 2   | 1          |
| Use of Tamil<br>in Teaching   | PCU518      | Use of Tamil in Teaching 1   | 1          |
|   | PCU519      | Use of Tamil in Teaching 2   | 1          |

- ❖ Although the Practicum carries zero AUs, a trainee teacher must pass the Practicum before he/she can be awarded the PGDE.

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## CONTENTS OF CORE MODULES AND PRESCRIBED ELECTIVES

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### EDUCATION STUDIES

Education Studies will acquaint trainee teachers with the key concepts and principles in education that are necessary for effective instruction and reflective practice in secondary schools. The modules will deal with pupil development, the social context within which schooling operates, the application of psychology in teaching and learning, proactive approaches to develop creative and critical thinking skills and the use of instructional technologies in the classroom.

The Education Studies component comprises two groups of modules namely *CORE MODULES* and *PRESCRIBED ELECTIVES*. The core modules are compulsory as they deal with basic educational concepts and principles. The prescribed electives allow choices which are intended to provide trainee teachers with an opportunity for in-depth and rigorous study of some significant areas in the field of education and to serve as a basis for the application of educational principles in a variety of instructional contexts.

## Education Studies

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PED513      | Instructional Technology   | Core            | 2          | -              |
| PED514      | Social Context of Teaching and Learning                            | Core            | 2          | -              |
| PED515      | The Psychology of Pupil Development and the Learning Process       | Core            | 2          | -              |
| PED516      | Teaching and Classroom Management                                  | Core            | 2          | -              |
| PED551      | Assessment for Effective Learning                                  | Prescribed      | 2          | -              |
| PED552      | Guidance and Counselling in Secondary Schools                      | Prescribed      | 2          | -              |
| PED553      | Teaching Pupils with Behavioural and Learning Problems             | Prescribed      | 2          | -              |
| PED554      | Instructional Design and Computer-based Learning                   | Prescribed      | 2          | -              |
| PED558      | The Psychology of Learning and Motivation                          | Prescribed      | 2          | -              |
| PED559      | Classroom Management and Discipline                                | Prescribed      | 2          | -              |
| PED560      | Strategies for Effective Thinking and Learning                     | Prescribed      | 2          | -              |
| PED561      | Using Pupil Learning Style to Maximise Instructional Effectiveness | Prescribed      | 2          | -              |
| PED562      | Classroom Planning to Enhance Pupil Learning                       | Prescribed      | 2          | -              |
| PED563      | Understanding and Helping Gifted and Talented Pupils               | Prescribed      | 2          | -              |
| PED565      | Understanding and Teaching Creative and Critical Thinking          | Prescribed      | 2          | -              |
| PED566      | Motivating Pupils for Learning and Thinking                        | Prescribed      | 2          | -              |
| PED567      | Assessment to Promote Thinking in Secondary Schools                | Prescribed      | 2          | -              |

cont'd

| <b>Module Code</b> | <b>Title</b>   | <b>Module Category</b> | <b>No. of AUs</b> | <b>Pre-requisites</b> |
|--------------------|--|------------------------|-------------------|-----------------------|
| PED569             | Developing Creativity in the Secondary Classroom   | Prescribed             | 2                 | -                     |
| PED570             | Understanding Social Behaviour of Secondary School Students                                  | Prescribed             | 2                 | -                     |
| PED571             | Advanced Social and Educational Measurement  | Prescribed             | 2                 | -                     |
| PED572             | Instructional Strategies and Learning Effectiveness  | Prescribed             | 2                 | -                     |
| PED574             | Handling Crises  | Prescribed             | 2                 | -                     |
| PED575             | Computer Applications in Educational Assessment  | Prescribed             | 2                 | -                     |
| PED576             | Motivating Students to Learn and Think   | Prescribed             | 2                 | -                     |
| PED577             | Achieving the Desired Outcomes of Education through Project Work in Secondary Schools        | Prescribed             | 2                 | -                     |
| PED578             | Using IT for Teaching and Assessment   | Prescribed             | 2                 | -                     |
| PED579             | Facilitating Sexuality Education in Secondary Schools  | Prescribed             | 2                 | -                     |
| PED580             | Constructive Learning with the Internet  | Prescribed             | 2                 | -                     |
| PED581             | What it means to be a Teacher  | Prescribed             | 2                 | -                     |
| PED582             | Creating Constructivist Activities with ICT  | Prescribed             | 2                 | -                     |
| PED583             | Schooling in Meritocratic Societies  | Prescribed             | 2                 | -                     |
| PED584             | How Schools Really Works   | Prescribed             | 2                 | -                     |
| PED585             | Moral Education Across the Curriculum  | Prescribed             | 2                 | -                     |
| PED586             | A New Learning Paradigm for Schools: The Learning Organisation (LO) Approach                 | Prescribed             | 2                 | -                     |
| PED587             | Rebels with a Cause!   | Prescribed             | 2                 | -                     |
| PED588             | Investing in Social Capital: Building Effective Relationships with Educational Stakeholders. | Prescribed             | 2                 | -                     |
| PED589             | Surviving and Thriving as a Beginning Teacher  | Prescribed             | 2                 | -                     |

### **PED513 Instructional Technology**

Learning, thinking, and the effective use of instructional technologies in the classroom; instructional planning models; selecting, creating, evaluating, and integrating instructional technologies and resource materials; promoting creativity and complex thinking through IT project work activities; organising and managing instructional activities with appropriate IT resources in the classroom.

### **PED514 Social Context of Teaching and Learning**

The historical development, structure and organisation of the Singapore education system; key education policies. Sociological perspectives on teaching, learning and socialisation: the school and society; home and school; effective school organisation; teaching as a profession. Philosophical perspectives on teaching and learning: the concept of education; moral education; authority, freedom and education.

### **PED515 The Psychology of Pupil Development and the Learning Process**

Understanding different aspects of adolescent development and how these influence the teaching and learning processes. It covers physical changes in adolescence, stages of moral development, formation of identity and the self-concept, and theories of intellectual development. Application of psychological principles and learning theories to classroom learning, understanding how pupils learn and how some pupils fail to learn; proactive approaches to motivate and enhance learning to develop creative and critical

thinking, problem-solving skills and remedial measures to help weaker pupils.

### **PED516 Teaching and Classroom Management**

Emphasis on the application of pedagogical knowledge and instructional skills for facilitating learning, the understanding of different models of classroom management and the role of classroom management in fostering academic achievement and appropriate pupil behaviour in different classroom settings such as, computer and science laboratories and subject rooms. In addition, the importance of the practices of proactive classroom management and positive interpersonal teacher behaviour on classroom learning is stressed.

### **PED551 Assessment for Effective Learning**

Role of assessment in the learning process; assessment practices in Singapore schools; basic knowledge and practical skills of monitoring and assessing pupils' learning; essentials of measurement in the cognitive, affective and behavioural domains; the use and construction of classroom tests; item analysis and test reporting; basic statistics for educational measurement; use of computer in educational assessment; evaluation of teaching and learning.

## **PED552 Guidance and Counselling in Secondary Schools**

Principles and practice of Pastoral Care and Career Guidance and its introduction to Singapore schools; group dynamics in the classroom and techniques in developmental group guidance; social and psychosocial factors affecting the personal development and learning of pupils; assessment of guidance needs; career development and career guidance needs of adolescents; the helping process and basic counselling skills.

## **PED553 Teaching Pupils with Behavioural and Learning Problems**

Types and classification of behavioural and learning problems; identification and diagnosis; causal factors; behaviour management; multidisciplinary approach in evaluation and intervention.

## **PED554 Instructional Design and Computer-based Learning**

The application of effective instructional software design principles to design, develop and evaluate a small web-based learning project. The use of a variety of software technologies, including appropriate authoring tools to create web-based learning objects. Participants for this course must have very good computer skills and have to attend appropriate software training prior attendance to this module.

## **PED 558 The Psychology of Learning and Motivation**

The role of the teacher as a motivator; motivating and demotivating factors affecting learning; strategies for motivating different types of learners.

## **PED559 Classroom Management and Discipline**

Recent research and development in classroom management and implications for teaching; teacher expectations/behaviours and their influence on pupil behaviour; establishing a supportive learning environment; issues in classroom management approaches and principles and practice of effective classroom management and discipline.

## **PED560 Strategies for Effective Thinking and Learning**

The place of thinking skills in teaching and learning; different types of thinking skills; the role of the teacher in creating a learning environment conducive for thinking; relevant thinking programmes and their implications for classroom practice; teaching thinking skills to enhance learning; observing, monitoring and evaluating the development of thinking skills in the learner.

## **PED561 Using Pupil Learning Style to Maximise Instructional Effectiveness**

Learning styles as one of the crucial factors for pedagogical decisions. The 'mind qualities' of the learners in terms of teaching strategies that can be used to maximise effective learning in the classroom.



## **PED562 Classroom Planning to Enhance Pupil Learning**

Planning of programmes, classroom practices and resources to meet the needs of individual students; making effective use of audiovisual resources; support materials and different strategies to encourage active learning; encouraging students to become autonomous learners.

## **PED563 Understanding and Helping Gifted and Talented Pupils**

Definition of terms; issues; concept of "academic excellence"; nature and identification of high ability pupils; development of the gifted education movement from Plato to the present time; overview of gifted education world-wide; justification for and against special provisions for the gifted; the role of the home and school; strategies to promote the growth and development of gifted and talented pupils.

## **PED565 Understanding and Teaching Creative and Critical Thinking**

Human beings as rational beings. Thinking: hardware, softwares and validation. Concepts, theories and instruments to assess creative and critical thinking. Thinking dispositions and competencies. Instructional strategies in relation to knowledge acquisition and inquiry. On becoming a creative and critical thinker.

### **PED566 Motivating Pupils for Learning and Thinking**

Skills that teachers can acquire to promote pupils' learning and thinking. Enabling pupils to learn for retention. Thinking organisers for critical thinking and structures for creative thinking. Preparing teachers to create a motivating classroom environment for effective learning and thinking.

### **PED567 Assessment to Promote Thinking in Secondary Schools**

Understanding and applying the basic principles in assessment to the classroom situation. Basic knowledge and practical skills to manage and monitor pupils' learning at the secondary level. Covers alternative modes of assessment to assess different thinking skills.

### **PED569 Developing Creativity in the Secondary Classroom**

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

### **PED570 Understanding Social Behaviour of Secondary School Students**

Social behaviour in the school and classroom; how students and teachers think about and interact with each other; how students think about their own attitudes and behaviour and how these are influenced by situational and social factors; self-esteem; social identity; helping and aggressive behaviour; obedience and conformity; leadership; and close relationships.

### **PED571 Advanced Social and Educational Measurement**

Essential topics in advanced social and educational measurement, particularly in Item Response Theory (IRT) and attitude measurement models; quantitative study and applications; some basic knowledge of probability and statistics; the usage and application of related computer software integrated with the theory of advanced social and educational measurement.

### **PED572 Instructional Strategies and Learning Effectiveness**

Careful planning and implementation of instruction for effective learning; various instructional strategies such as whole-class teaching, small group instruction, group work, individual instruction, out-of-classroom instruction, games and simulation and their effective implementation for facilitating learning in the classroom; the importance of empowerment of students in learning and the teaching of thinking and learning strategies to students during the process of instruction.

## **PED574 Handling Crises**

Preparing teachers for a variety of crises that may arise in secondary school classrooms. Teachers' responsibilities and options for action in crises. An overview of challenges resulting from substance abuse, street gangs, suicidal behaviour, date rape, family tensions and other personal as well as health-related emergencies. Current community resources available to secondary school teachers handling such crises.

## **PED575 Computer Applications in Educational Assessment**

State-of-the-art computer software for various assessment tasks, including item banking, item analysis, item calibration, test construction, test administration, test scoring and test reporting, and their applications for school-based testing. An examination of some benefits and/or limitations of using computers for educational assessment.

## **PED576 Motivating Students to Learn and Think**

Students learn well when they are highly motivated. Teachers can acquire strategies to instil positive attitude and perceptions about learning among their students. Knowing how the brain learns also enables teachers to use brain compatible teaching strategies so that students will learn better and faster. Using cooperative learning activities and catering to different learning styles will enable more students to acquire learning-to-learn and thinking skills in an enjoyable manner.

### **PED577 Achieving the Desired Outcomes of Education through Project Work in Secondary Schools**

The module attempts to relate the initiatives introduced through the concept of “Thinking School Learning Nation” (1997) to the Desired Outcomes of Education (1998). The rationale for the inclusion of Project Work as one of the criteria for University admission will be discussed. Ways of building teamwork, application of thinking strategies, infusion of thinking skills, development of metacognitive skills, critical thinking, creative thinking, management of group project and assessment of group project work will be the topics covered in this module. Assessment of this module will be by group project. Marks will be given for individual reflective journal writing and peer evaluation. This mode of assessment will give participants a chance to be acquainted with the task awaiting for them in school.

### **PED578 Using IT for Teaching and Assessment**

The use of IT in schools is a key strategy laid out by Singapore’s Masterplan for IT in Education. School teachers are called upon to use IT in their teaching to help pupils with learning skills, creative thinking and communication skills. This module is designed to prepare trainee teachers with some essential IT techniques to create an IT-enhanced learning environment and conduct IT-based classroom assessment. Participants of this module are supposed to have taken the IT workshops or have equivalent knowledge and skills. The techniques covered by this module include classroom presentation, simple data analysis from educational assessment and psychological measurement.

### **PED579 Facilitating Sexuality Education in Secondary Schools**

This course provides teachers with the content knowledge on human sexuality as well as pedagogic skills to deliver sexuality education to teenagers in secondary schools. Course participants will have the opportunity not only to gain basic knowledge of physiological changes and development in adolescents, but also develop an awareness of attitudes and emotional, cultural and moral issues. They will participate in hands-on activities that facilitate and promote discussions. Topics such as gender roles, sexual health and behaviour, and intimate relationships, as well as issues such as contraception, abortion and homosexuality will be addressed.

### **PED580 Constructive Learning with the Internet**

In this knowledge and information age, ability to process information and to construct one's knowledge has become an important life skill. To remain a confident and competent citizen in this new millennium, one has to be a life-long and self-directed learner. Internet is perhaps the fastest expanding source of information and its potential as educational resources is tremendous. This course aims to provide trainee teachers an understanding of the affordances of the Internet and its various applications in education so that they can use Internet effectively in teaching and in encouraging self-directed constructive learning.

### **PED581 What It Means To Be Teacher**

The course will initiate trainee teachers to two traditional paradigms of teaching: teaching as transmission of knowledge and skills and as transformation of character, virtue and thought. It will explore the challenge and uncertainty, the personal creativity and commitment, the moral and intellectual dimensions of teaching. It intends to expose trainee teachers to other aspects of teaching that tend to be overlooked, and lead trainee teachers to a deepened appreciation of being a teacher and a heightened sense of its worth.

### **PED582 Creating Constructivist Activities with ICT**

Use of various IT-based tools to design and create various constructivist activities to help pupils learn; various aspects on the theoretical framework of constructivism and cognitivism; various strategies of using tools to promote creativity and thinking; use of IT tools like semantic networking, multimedia authoring tools, and office productivity software.

### **PED583 Schooling in Meritocratic Societies**

Meritocracy is one of the “sacred cows” of Singapore’s education system. But does this mean that all students experience schooling in the same way? This module explores the implications of such a system for different groups of students (male/female; different racial/ethnic groups; socio-economic status) and some of the challenges these issues might pose for teachers in Singapore. By drawing on teaching and learning experiences in Singapore, as well as

other meritocratic systems across the world, participants will have an opportunity to consider different strategies that can be used to manage these challenges.

## **PED584 How Schools Really Work**

Ask most young adults whether the schools they attended developed their full potential and the answer will probably be “NO”. This not surprising as schools have historically failed as many students as they have passed. But nowadays we are constantly being told that the process of globalisation and the shift towards a knowledge-based economy will change this. It is said that all abilities will be developed to the full and students will for the first time have genuine equality of educational opportunity. But how easy is it to change our schools? How are schools related to the broader society? What processes are at work in schools that make change difficult to accomplish? On this module we shall explore a number of sociological themes such as the process of differentiation and subcultural formation, cultural deprivation and cultural reproduction, school and classroom culture, the hidden curriculum, teacher strategies and the role of the teacher. We shall look at case studies of improving schools in Singapore and research into school effectiveness.



## **PED585 Moral Education Across the Curriculum**

It has often been pointed out that every teacher is a moral educator. This module is an attempt to show why and how this saying is true. With help of actual examples, the explores the various facets of a teacher's work in the classroom, school and community, in order to show that all subject teachers, not only Civics and Moral Education teacher, teach knowledge which are needed for our students' complete understanding of their moral obligations within their specific life situations. They do this both within the curriculum, and also at co-curricular activities. And beyond promoting the understanding of moral obligations, all teachers also have a role in training students in the commitment, strength of will and skills needed for effective moral practice, no matter what subject they teach and what CCA they conduct.

## **PED586 A New Learning Paradigm for Schools: The Learning Organisation (LO) Approach**

Are we teaching what we ought to be teaching in the way that we ought to teach? Are our students learning what they ought to be learning in the way they ought to learn? How can teachers promote more effective and efficient learning through the practice of the five disciplines of the Learning Organisation (LO), namely, Personal Mastery, Mental Models, Shared Vision, Team Learning and Systems Thinking. This module is an introduction to how beginning teachers can be employed for their classroom and school-wide interactions with other participants of the school organisation.

## **PED587 Rebels with a Cause!**

This module examines a number of controversial rebel educators who rocked the boat of established educational ideas and practices throughout history. Examples of rebel philosophy include:

- “ Do not tell a child anything which learn for himself” (Rousseau).
- “ Education must harmonize with nature” (Pestalozzi).
- “ Replace authority in schools with freedom” (A.S.Neill).
- “ Children should be allowed to follow their own interests” (Bertrand Russell).
- “ Schools encourage children to act stupidly” (John Holt).

These controversial statements will be discussed in terms of their relevance to the prevailing socio-economic environment in Singapore today. Students enrolled in this module will be encouraged to reflect on the material presented through lectures, tutorials, student seminar presentations, formal debates, films and informal discussions.

## **PED588 Investing in Social Capital: Building Effective Relationships with Educational Stakeholders**

This module explores the key concept of social capital and how school professionals can leverage on social capital to build a positive school-community links with major educational stakeholders. It examines examples of cross-cultural research on the benefits of parental involvement in schooling and provides opportunities for basic research into parent-

teacher relationships in Singapore and strategies for creative partnerships at primary and secondary levels of schooling.

### **PED589 Surviving and Thriving as a Beginning Teacher**

This module discusses the various challenges facing beginning teachers in Singapore secondary schools and junior colleges, and aims to better prepare them for their careers. Many teachers find the transition from their teacher preparation year to schools daunting because they often lack an adequate understanding of what lies ahead of them. This module will provide an opportunity for them to a) discuss and clarify their aspirations, expectations, fears and concerns; b) understand some of the key roles, responsibilities and challenges awaiting them in their relationships with other stakeholders in the school system, and c) think about their career progression beyond the initial years.

## CURRICULUM STUDIES

The Curriculum Studies options are teaching subjects relevant to the needs of secondary schools, junior colleges and centralised institutes. The aim in teaching Curriculum Studies is to expose trainee teachers to the syllabi and textbooks in the curriculum and train the trainee teachers in the methods and techniques of teaching subjects at the secondary and junior college levels. Trainee teachers in training will be assigned to specialise in two curriculum subject areas.

### The Teaching of Accounting

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCK511      | Teaching Principles of Accounts at Secondary Level                   | Core            | 6          | -              |
| PCK513      | Assessment and Further Strategies in Teaching Principles of Accounts | Core            | 2          | -              |

### PCK511 Teaching Principles of Accounts at Secondary Level

The rationale and structure of Principles of Accounts in the school curriculum; selection and sequencing of subject content based on the thematic learning approach. Application of a variety of strategies and resources for teaching and learning of Principles of Accounts, including cooperative learning, peer tutoring, mastery learning, and practice sets. Application of frameworks like Dimensions of Learning, learning styles and brain-based learning in teaching express and normal course pupils. Using technology in Accounting education. Lesson planning and micro-teaching of selected topics in the Principles of Accounts syllabus, with peer feedback and self-reflection.

### **PCK513 Assessment and Further Strategies in Teaching Principles of Accounts**

Modes of assessment and examination requirements for Principles of Accounts at 'O' level and Principles of Accounting at 'A' level; test analysis and construction, diagnosis, feedback and remediation. Extending teaching strategies to 'A' Level Accounting at centralised institutes. Development of higher level thinking skills in Accounting through inquiry and guided discovery, problem-solving and case studies.

## The Teaching of Art

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCA511      | Teaching Art at the Secondary Level          | Core            | 1          | -              |
| PCA512      | Artistic Processes and the Art Curriculum I  | Core            | 3          | -              |
| PCA513      | Ceramics                                     | Core            | 2          | -              |
| PCA515      | Artistic Processes and the Art Curriculum II | Core            | 2          | -              |

### **PCA511 Teaching Art at the Secondary Level**

A survey of historical and theoretical developments in secondary art education with particular emphasis on recent international theories and practices in the field regarding creativity and their importance for art education in Singapore. Strategies for the implementation of IT to expand the range of available creative options. The infusion of National Education (NE) into the art curriculum.

### **PCA512 Artistic Processes and the Art Curriculum I**

Study of an area of two-dimensional studio practice that can be used at the secondary level. Exploration of the theoretical underpinnings of different creative art practices and the curricular implications of IT and NE in a developmental approach to encourage the intellectual and emotional development of students in the secondary school.

### **PCA513 Ceramics**

An introduction to the teaching of ceramics at the secondary level including a range of ceramic forming techniques and exploration of decoration, glazing and firing techniques. Emphasis on a creatively developmental approach with due consideration of the incorporation of IT and NE.

### **PCA515 Artistic Processes and the Art Curriculum II**

Building on the Semester 1 modules, the development by trainee teachers of a body of work in a chosen area of studio practice, to be used as a focus to investigate aspects of secondary art education such as syllabus and lesson planning and development including the use of IT. Evaluation strategies as transferable skills. The rich multicultural heritage and recent history of Singapore as a locus of student identity.

## The Teaching of Biology

| Module Code | Title                   | Module Category | No. of AUs | Pre-requisites |
|-------------|-------------------------|-----------------|------------|----------------|
| PCB511      | Teaching of Biology I   | Core            | 2          | -              |
| PCB512      | Teaching of Biology II  | Core            | 4          | -              |
| PCB513      | Teaching of Biology III | Core            | 2          | -              |

### PCB511 Teaching of Biology I

Three areas of psychological concern that underline the teaching of Biology/Science.

- The nature of science : a paradigm for the analysis and rationale of the biology curriculum in schools.
- Concept Learning : including individual differences between pupils in different ability streams; readiness and sequential learning; learning styles; perceptual and conceptual differences; misconceptions, alternative conception and conceptual change.
- Thinking and Learning : with creative and critical thinking; cognitive development, inductive - deductive learning; problem-solving and inquiry/discovery learning.



## **PCB512 Teaching of Biology II**

The Biological Sciences curriculum in Singapore schools from Secondary to Pre-University levels; vis-à-vis the relevant syllabi, textbooks, teachers' guides and reference journals. Planning of Biology 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 cooperative learning strategies. Practice of these skills in a microteaching/mini-teaching setup. The management and control of pupil behaviour together with safety practices in science laboratories. IT and its application for Biology teaching with reference to materials and resources from the Internet.

## **PCB513 Teaching of Biology III**

Issues on the what and why of testing in Science teaching and learning; formulating tables of specification; and the construction of sample test items. Practical skills assessment (SPA) and rubrics for practical assessment and marking. Marking of examination scripts with implications for teachers and teaching styles. Issues and safety measures in conducting Life Sciences experiments in secondary schools. The role of resource centres in planning for field trips in Biology teaching outside the classroom.

## The Teaching of Chemistry

| Module Code | Title                         | Module Category | No. of AUs | Pre-requisites |
|-------------|-------------------------------|-----------------|------------|----------------|
| PCY511      | The Teaching of Chemistry I   | Core            | 4          | -              |
| PCY512      | The Teaching of Chemistry II  | Core            | 2          | -              |
| PCY513      | The Teaching of Chemistry III | Core            | 2          | -              |

### PCY511 The Teaching of Chemistry I

Basic 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. The integration of IT into the chemistry curriculum. The planning and teaching strategies crucial for the effective teaching of chemistry that includes unit and lesson planning, the inquiry approach, constructivist approach, problem-solving, expository teaching, demonstrations, practical work and project work. The preparation and use of teaching aids and resource materials.

### PCY512 The Teaching of Chemistry II

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. Trainee teachers practise the relevant skills through mini-presentations on selected chemistry topics at the secondary level. Presentations by trainee teachers are reviewed and critiqued by peers and the tutor.

### **PCY513 The Teaching of Chemistry III**

The effective evaluation of chemistry teaching and learning. Purposes of evaluation, tables of specifications, tests construction, administration, marking, and analysis; interpretation of test scores. Alternative assessment modes such as open-book tests, take-home examinations, concept mapping, assessment of attitudes and values, and in particular, the use of project work will be considered. The management of the Chemistry laboratory and laboratory safety will also be discussed.

## The Teaching of Chinese Language

| Module Code | Title                          | Module Category | No. of AUs | Pre-requisites |
|-------------|--------------------------------|-----------------|------------|----------------|
| PCC511      | Teaching of Chinese Language 1 | Core            | 5          | -              |
| PCC512      | Teaching of Chinese Language 2 | Core            | 3          | -              |

### **PCC511 Teaching of Chinese Language 1**

Different theories of language acquisition. Various approaches to the teaching of Chinese in the bilingual context of Singapore. The development of listening, speaking and reading skills with various levels of thinking skills. Chinese language testing. IT for the teaching of Chinese language.

### **PCC512 Teaching of Chinese Language 2**

Various approaches to the teaching of Chinese vocabulary and syntax. The objectives and various approaches to the teaching of writing skills with various levels of thinking skills. IT for the teaching of Chinese language.

## The Teaching of Chinese Literature

| Module Code | Title                            | Module Category | No. of AUs | Pre-requisites |
|-------------|----------------------------------|-----------------|------------|----------------|
| PCJ511      | Teaching of Chinese Literature 1 | Core            | 6          | -              |
| PCJ512      | Teaching of Chinese Literature 2 | Core            | 2          | -              |

### **PCJ511 Teaching of Chinese Literature 1**

The aims and objectives of teaching Chinese literature. Criteria for selecting literary texts and reading materials. Teaching of the history of Chinese literature. Various approaches and strategies for the teaching of Chinese poetry, short stories and novels. Questions with various levels of thinking skills for teaching and testing. IT for the teaching of Chinese literature.

### **PCJ512 Teaching of Chinese Literature 2**

The organisation of meaningful activities for the appreciation of Chinese prose and drama. Questions with various levels of thinking skills for teaching and testing. IT for the teaching of Chinese literature.

## The Teaching of Computer Applications

| Module Code | Title   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCQ522      | Topics in Computer Applications                   | Core            | 4          | -              |
| PCQ524      | Computer Laboratories and Resources               | Core            | 1          | -              |
| PCQ526      | Assessment and Coursework                         | Core            | 2          | -              |
| PCQ527      | Instructional Approaches in Computer Applications | Core            | 1          | -              |

### PCQ522 Topics in Computer Applications

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

### PCQ524 Computer Laboratories and Resources

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

## **PCQ526 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.

## **PCQ527 Instructional Approaches in Computer Applications**

The computer applications syllabus as prescribed in the Normal (Technical) course and the planning of lessons. Aims of computer education for schools, the rationale and objectives of the syllabus, conceptual framework, organisation and sequencing, nature and principles of computing, lesson plan and preparation.

The various instructional approaches appropriate for the teaching of computing, such as exposition, investigation, discussion, problem solving, hands-on activities and cooperative groupwork. The opportunity to practise teaching skills during micro-teaching sessions.

## The Teaching of Design and Technology

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCN511      | Teaching and Evaluating the Problem Solving Process        | Core            | 3          | -              |
| PCN512      | Materials Processing                                       | Core            | 3          | -              |
| PCN513      | Managing and Teaching the Design and Technology Curriculum | Core            | 2          | -              |

### **PCN511 Teaching and Evaluating the Problem Solving Process**

Strategies to teach problem solving in the Design and Technology curriculum. Introduction to the teaching of graphic communication skills. Product research, creative and critical thinking skills, anthropometry and ergonomics, modelling and computer-aided design. Experience in coming to grips with self-identified problem and the production of a folio. Hands-on experience in the evaluation of folios and artefacts according to prescribed marking scheme. A simulated environment to analyse and evaluate trainee teachers' own teaching efforts through peer teaching sessions with special emphasis on introductory procedures and closures, questioning skills and practical workshop demonstrations. Encouragement will be given towards solutions of problems that have elements of National Education in them.

### **PCN512 Materials Processing**

Correct and safe work habits and selection of the appropriate technique in the use of materials as expected of all Design and Technology teachers. Hands-on experience, which includes an integration of design and multi-material approach to project work to



enable student teachers to provide advice on solutions to design problems. Properties and working characteristics of materials, processes involving setting and marking out, shaping by wasting and forming, methods of joining, surface finishing and heat treatment, safe and correct usage and maintenance of basic hand tools. The production of simple electronic devices. Hands-on experience in the use of common basic machines used in secondary schools. The safe operations of the basic machines through the different stages of mini projects. Use of powered hand tools and simple computer assisted machining tools. As far as possible, elements of National Education will be incorporated in the designs of the finished artefacts.

### **PCN513 Managing and Teaching the Design and Technology Curriculum**

The Design and Technology syllabus for 'O' level in relation to its philosophy, implementation and evaluation. An in-depth analysis of the curriculum in conjunction with the development of a scheme of work. Aspects on workshop organisation and management, resource and facilities planning and safe practices in the workshop. An integrated approach to the teaching of the common processes involving wood, metal, and plastics - their characteristics and workability. The selection of appropriate materials and processes in the development of artefacts. The effective integration of 'technology' into the curriculum. National Education issues on the change to Design and Technology instead of teaching the crafts are incorporated.

## The Teaching of Economics

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCO511      | Basic Approaches to Teaching A-level Economics                       | Core            | 5          | -              |
| PCO512      | Further Instructional Approaches and Assessment of A-level Economics | Core            | 3          | -              |

### **PCO511 Basic Approaches to Teaching A-level Economics**

Introduction to the A-level Economics curriculum and basic strategies for teaching the subject in the Singapore junior college. Discussion of curriculum aims and examination requirements. Selection of content and planning of units and lessons. Organising pupils for learning in large and small groups. Techniques of explaining economic concepts and principles and the applications that can be made with case studies and economic data.

### **PCO512 Further Instructional Approaches and Assessment of A-level Economics**

Classroom-based approaches and inquiry-based activities for the development of selected thinking skills and application of IT. The approaches include critical thinking, decision-making, inquiry learning and the use of WinEcon courseware and economic resources that may be found on the internet. Modes of assessment designed to test various forms and levels of economic understanding.

## The Teaching of Elements of Office Administration

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| POA511      | Teaching Office Administration to 'N' Pupils | Core            | 5          | -              |
| POA513      | Teaching Computing in Office Administration  | Core            | 3          | -              |

### **POA511 Teaching Office Administration to 'N' Pupils**

Introduction of some basic office administration concepts and skills essential to operate effectively in the work environment. Functions of the office, office communications, document storage and retrieval, mail handling, receipts and payments and stationery control. A variety of classroom methods relevant to the teaching and learning of Elements of Office Administration (EOA) for the Normal pupils. Different methods of assessment for EOA.

### **POA513 Teaching Computing in Office Administration**

Various approaches and strategies appropriate to the teaching of computing to EOA pupils. Focus on strategies and techniques that are specially catered to the teaching of computing to the less academically inclined pupils which include classroom management in the computer laboratory. Various subject topics like the nature and principles of computing; key developments and applications of word-processing, spreadsheet and computer graphics in the office. Hands-on practice on computers as well as micro-teaching sessions to develop skills in teaching computing to EOA pupils.

## The Teaching of English Language

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCE511      | Language Teaching Approaches                                     | Core            | 6          | -              |
| PCE512*     | Language Study (Grammar)   | Core            | 2          | -              |
| PCE513      | English Language: Teaching Issues In Singapore Secondary Schools | Core            | 2          | -              |

\* For those who have no background in language studies at undergraduate level

### **PCE511 Language Teaching Approaches**

Listening, speaking, reading and writing processes. Insights into present classroom teaching approaches. Grammar and vocabulary learning problems. A range of methods to develop language proficiency. Ways of adapting textbooks, selecting and exploiting materials, devising tasks and activities to maximise pupil learning and participation. Practical unit and lesson planning for actual teaching sessions with groups of remedial pupils in Singapore secondary schools. The development of trainee teachers' ability to reflect upon and adapt their teaching approaches to suit learner needs.

### **PCE512 Language Study (Grammar)**

Understanding the language requirements of the Singapore secondary school syllabus. How to analyse, evaluate and remedy problems in pupil work more effectively.

**PCE513 English Language: Teaching Issues in Singapore Secondary Schools**

Consolidation of trainee teachers' knowledge and perceptions of language teaching in a range of school contexts (building on PCE511).

## The Teaching of English Literature

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCR511      | Teaching Literature: Aims and Approaches           | Core            | 6          | -              |
| PCR512      | Writing about Literature and Literature Assessment | Core            | 2          | -              |
| PCR 513*    | Approaches to Literature                           | Core            | 2          | -              |

\*For those who have no background in language at undergraduate level

### **PCR511 Teaching Literature: Aims and Approaches**

The aims of literature teaching, specific objectives in the classroom, the literature teaching situation in respect of the local context, prescribed texts and syllabuses, and general methodology. Considerations of official directives including National Education and IT initiatives in literature teaching. Techniques for teaching the short story, novel, drama and poetry for literary development and creative and critical thinking. Micro-teaching to help improve student skills before teaching practice.

### **PCR512 Writing about Literature and Literature Assessment**

Developing and linking writing tasks for literature appreciation and criticism. Examining the connection between teaching and assessment goals by looking at the principles and practice of literature assessment at the secondary and junior college levels. Applying these principles to the setting and critiquing of literature tests.

## **PCR513 Approaches to Literature**

Introduction to literary analysis of texts in the three major literary forms – narrative, poetry and drama. Elements of textual analysis and literary terminology will be emphasised.

## The Teaching of Geography

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCG511      | Approaches to the Teaching and Assessment of Geography | Core            | 4          | -              |
| PCG512      | Resources in Geography Teaching                        | Core            | 2          | -              |
| PCG514#     | Teaching Social Studies to Secondary Students          | Core            | 2          | -              |
| PCL514*     | Themes in Secondary Social Studies                     | Core            | 2          | -              |

**Note:** # For those offering CS Geography but not CS History.

\* For those Offering CS Geography and CS History.

### **PCG511 Approaches to the Teaching and Assessment of Geography**

An introduction to different modes of teaching geography ranging from expository teaching to the use of poetry, songs, drama and information technology in classrooms and field. The teaching of creative thinking and national education in the Geography syllabus. The design of different modes of assessment to evaluate learning outcomes.

### **PCG512 Resources in Geography Teaching**

The wide range of resources such as maps, models, photographs and computer software and courseware that might be used to enhance the teaching and learning of geography.

### **PCG514 Teaching Social Studies to Secondary Students**

This module will explore the nature and scope of teaching Social Studies at secondary level. A variety of methods relevant to the teaching and learning of



Social Studies will be demonstrated. It will include the setting and marking of source-based and structured essay questions.

**PCL514 Themes in Secondary Social Studies**

(for trainee teachers offering both History *and* Geography as their Curriculum Studies subjects)

Provisions of the opportunity to do independent research on a theme in the Secondary Social Studies Syllabus. Exploration of the major issues relevant to the theme in terms of its content and pedagogical concerns. A practicum-based project may be useful to apply and reinforce ideas on the theme researched.

## The Teaching of Lower Secondary Geography

This subject is offered to student teachers who did not study Geography at university level but who possess at least grade 'B' in Geography at 'A' level. These trainee teachers would offer a content module PCG521 in addition to pedagogical modules PCG511 to PCL514 offered by other PGDE(Secondary) students with Geography at university level.

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCG511      | Approaches to the Teaching and Assessment of Geography | Core            | 4          | -              |
| PCG512      | Resources in Geography Teaching                        | Core            | 2          | -              |
| PCG514#     | Teaching Social Studies to Secondary Students          | Core            | 2          | -              |
| PCL514*     | Themes in Secondary Social Studies                     | Core            | 2          | -              |
| PCG521      | Introduction to Geography                              | Core            | 2          | -              |

**Note:** # For those offering CS Lower Secondary Geography but not CS History.

\* For those offering CS Lower Secondary Geography and CS History.

### **PCG511 Approaches to the Teaching and Assessment of Geography**

An introduction to different modes of teaching geography ranging from expository teaching to the use of poetry, songs, drama and information technology in classrooms and field. The teaching of creative thinking and national education in the Geography syllabus. The design of different modes of assessment to evaluate learning outcomes.

### **PCG512 Resources in Geography Teaching**

The wide range of resources such as maps, models, photographs and computer software and courseware

that might be used to enhance the teaching and learning of geography.

### **PCG514 Teaching Social Studies to Secondary Students**

This module will explore the nature and scope of teaching Social Studies at secondary level. A variety of methods relevant to the teaching and learning of Social Studies will be demonstrated. It will include the setting and marking of source-based and structured essay questions

### **PCL514 Themes in Secondary Social Studies**

(for trainee teachers offering both History *and* Geography as their Curriculum Studies subjects)

Provision of the opportunity to do independent research on a theme in the Secondary Social Studies Syllabus. Exploration of the major issues relevant to the theme in terms of its content and pedagogical concerns. A practicum-based project may be used to apply and reinforce ideas on the theme researched.

### **PCG521 Introduction to Geography**

Three components of geography – physical geography, human geography and techniques. Knowledge of the lithosphere, biosphere and atmosphere and environmental problems in physical geography, spatial organisation of society and human activities in human geography. Techniques of map analysis and interpretation.

## Guidance and Counselling

This subject is offered in lieu of a teaching subject.

| Module Code | Title   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCW511      | Introduction to Pastoral Care and Career Guidance | Core            | 2          | -              |
| PCW512      | Basic Skills in Pastoral Groupwork                | Core            | 2          | -              |
| PCW513      | Basic Skills in Pastoral Casework                 | Core            | 2          | -              |
| PCW514      | Career Guidance in Schools                        | Core            | 2          | -              |

### **PCW511 Introduction to Pastoral Care and Career Guidance**

The concept of Pastoral Care and Career Guidance in schools, with emphasis on the whole-school approach. The developmental guidance skills necessary to create a conducive learning environment in the school, to foster interaction and communication in the classroom, to enhance the self esteem of pupils and foster their personal and social development.

### **PCW512 Basic Skills in Pastoral Groupwork**

The group guidance aspect of Pastoral Care and Career Guidance. An overview of group processes and group theories, techniques in group guidance, decision-making, problem-solving and conflict-resolution in groups, and hands-on activities to develop group guidance skills.

### **PCW513 Basic Skills in Pastoral Casework**

The necessary knowledge and counselling skills to identify and help pupils with learning difficulties and personal problems. An overview of cognitive, affective and behavioural theories in counselling, their related approaches and intervention strategies with special reference to stress management and the handling of behavioural problems in schools.

### **PCW514 Career Guidance in Schools**

The importance of bridging the gap between the school and the world of work through the planning and implementation of a suitable career guidance programme in schools. Theories in career development, the role of the school in providing career guidance, approaches and techniques in career guidance and issues in career guidance.

## The Teaching of History

| Module Code | Title   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCH513      | Teaching of Secondary History and Social Studies                    | Core            | 4          | -              |
| PCH515      | Teaching of Secondary History and Social Studies through Fieldtrips | Core            | 2          | -              |
| PCH516      | Assessment and Evaluation in Secondary History and Social Studies   | Core            | 2          | -              |
| PCL 514*    | Themes in Secondary Social Studies                                  | Core            | 2          | -              |

**Note:** \* For those offering CS History and CS Geography.

### **PCH513 Teaching of Secondary History and Social Studies**

Various strategies in the teaching of history and social studies. Syllabus for the teaching of Social Studies to Normal Technical students at the lower secondary level. Expose trainee teachers to create strategies such as the use of role-play, simulation and the effective use of sources in lessons and information technology. Emphasis on the infusion of creative and critical thinking skills.

### **PCH515 Teaching of Secondary History and Social Studies through Fieldtrips**

Teaching trainee teachers to plan and conduct fieldtrips to selected sites in Singapore. Through fieldtrips, trainee teachers will gain important nuggets of information about their society and heritage.

## **PCH516 Assessment and Evaluation in Secondary History and Social Studies**

Trainee teachers will be taught how to interpret sources and use them effectively in assessment. The setting and marking of source-based questions and structured essay questions for History and Social Studies. Other forms of assessment and evaluation such as in Project Work and IT-based projects.

## **PCL 514 Themes in Secondary Social Studies**

*(For trainee teachers offering both History and Geography as their Curriculum Studies subject)*

Provision of the opportunity to do independent research on a theme in the Secondary Social Studies Syllabus. Exploration of the major issues relevant to the theme in terms of its content and pedagogical concerns. A practicum-based project may be used to apply and reinforce ideas on the theme researched.

## The Teaching of Lower Secondary History

This subject is offered to trainee teachers who did not study History at university level but who possess at least grade 'B' in History at 'A' level. These trainee teachers would offer a content module PCH521 in addition to pedagogical modules PCH513 to PCL514 offered by other PGDE(Secondary) trainee teachers with History at university level.

| Module Code | Title   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCH513      | Teaching of Secondary History and Social Studies                    | Core            | 4          | -              |
| PCH515      | Teaching of Secondary History and Social Studies through Fieldtrips | Core            | 2          | -              |
| PCH516      | Assessment and Evaluation in Secondary History and Social Studies   | Core            | 2          | -              |
| PCL514*     | Themes in Secondary Social Studies                                  | Core            | 2          | -              |
| PCH521      | Teaching of Lower Secondary History Content                         | Core            | 2          | -              |

**Note:** \* For those offering CS Lower Secondary History and CS Geography.

### PCH513 Teaching of Secondary History and Social Studies

This module is designed to equip trainee teachers with various strategies in the teaching of history and social studies. It will also cover the syllabus for the teaching of Social Studies to Normal Technical students at the lower secondary level. This module will expose trainee teachers to create strategies such as the use of role-play, simulation and the effective use of sources in lessons and information technology. Emphasis will be given to the infusion of creative and critical thinking skills.



### **PCH515 Teaching of Secondary History and Social Studies through Fieldtrips**

This module is aimed at teaching trainee teachers to plan and conduct fieldtrips to selected sites in Singapore. Through fieldtrips, trainee teachers will gain important nuggets of information about their society and heritage.

### **PCH516 Assessment and Evaluation in Secondary History and Social Studies**

Trainee teachers will be taught how to interpret sources and use them effectively in assessment. The module will include the setting and marking of source-based questions and structured essay questions for History and Social Studies. Other forms of assessment and evaluation such as in Project Work and IT-based projects will be explored.

### **PCL 514 Themes in Secondary Social Studies**

*(For trainee teachers offering both History and Geography as their Curriculum Studies subject)*

Provision of the opportunity to do independent research on a theme in the Secondary Social Studies Syllabus. Exploration of the major issues relevant to the theme in terms of its content and pedagogical concerns. A practicum-based project may be used to apply and reinforce ideas on the theme researched.

## **PCH521 Teaching of Lower Secondary History Content**

The significant achievements of Southeast Asian, Indian and Chinese civilisations: the rise and growth of maritime kingdoms in Southeast Asia, the Indus Valley civilisation, the Mauryan and Gupta periods in India, the Shang civilisation in China, and the achievements of the Chin, Han and Tang dynasties. The social, economic and political history of Singapore from 1819 to 1965: the story of Temasek in the 14th century and the founding of modern Singapore in 1819, the social and economic development of the British colony in the 19th and early 20th centuries, the Japanese invasion and occupation of Singapore, the postwar economic and social reconstruction and the political events leading to the creation of an independent city-state in August 1965.

## The Teaching of Home Economics

| Module Code | Title   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCX511      | Home Economics Curriculum and Evaluation      | Core            | 2          | -              |
| PCX512      | The Teaching of Food and Nutrition            | Core            | 2          | -              |
| PCX513      | The Teaching of Clothing and Textiles         | Core            | 2          | -              |
| PCX514      | The Teaching of Family and Consumer Education | Core            | 2          | -              |

### **PCX511 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; the use of appropriate evaluation procedures in facilitating effective learning.

### **PCX512 The Teaching of Food and Nutrition**

The Food and Nutrition syllabus at the secondary level; strategies and methods to teach basic principles of food preparation; organisation of investigative and practical work, and safety in the food laboratory.

### **PCX513 The Teaching of Clothing and Textiles**

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, choice, use and care of equipment, and skills in clothing construction.

## **PCX514 The Teaching of Family and Consumer Education**

Various approaches to the teaching of 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.

## The Teaching of Malay Language

| Module Code | Title                        | Module Category | No. of AUs | Pre-requisites |
|-------------|------------------------------|-----------------|------------|----------------|
| PCD510      | Teaching of Malay Language 1 | Core            | 5          | -              |
| PCD511      | Teaching of Malay Language 2 | Core            | 3          | -              |

### **PCD510 Teaching of Malay Language 1**

A theoretical and practical understanding of the Malay Language curriculum in secondary school: Its contents, development and implementation, and the design, selection and integration of appropriate media and materials in the teaching of the language at secondary level. The various approaches and methods to language acquisition and learning such as cooperative learning and concept-based learning. The reading process, developing skills in reading. Understanding of the writing process, the various types of writing, the levels of writing skills, with the emphasis on critical and creative thinking skills, and the evaluation of writing skills. Oral and speaking skills. The teaching of listening and speaking.

### **PCD511 Teaching of Malay Language 2**

The process of vocabulary acquisition and development, teaching and learning strategies including the teaching of Malay proverbs. The various learning strategies such as problem-based learning, inter-disciplinary project work and multiple intelligence. The use of computer and IT-based materials in the teaching of Malay language. Testing, the construction and administration of test items, item review and analysis, discrete item test and integrative tests, and developing Malay language test and materials for the secondary level.

## The Teaching of Malay Literature

| Module Code | Title                          | Module Category | No. of AUs | Pre-requisites |
|-------------|--------------------------------|-----------------|------------|----------------|
| PCJ513      | Teaching of Malay Literature 1 | Core            | 6          | -              |
| PCJ514      | Teaching of Malay Literature 2 | Core            | 2          | -              |

### **PCJ513 Teaching of Malay Literature 1**

The aims and objectives of teaching literature and the place of literature in curriculum. An overview of developments of modern Malay and Indonesian literature. The general methods and techniques of teaching literature. The knowledge and skills of teaching modern Malay and Indonesian novel, short story, poetry and drama/play at secondary schools. Evaluation and testing of modern literature.

### **PCJ514 Teaching of Malay Literature 2**

An overview of the main features and developments of traditional Malay literature. The knowledge and skills of the teaching of traditional Malay prose and poetry. The principles, methods and techniques of the teaching of selected classical genres and texts. Appreciation, evaluation and testing of traditional Malay literature.

## The Teaching of Mathematics

| Module Code | Title                                   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCM513      | Teaching and Learning of Mathematics I  | Core            | 6          | -              |
| PCM514      | Teaching and Learning of Mathematics II | Core            | 2          | -              |

### PCM513 Teaching and Learning of Mathematics I

Aims and objectives of mathematics education, Mathematics curriculum in Singapore, concept formation and learning theories in mathematics, teaching approaches and classroom organisation, lesson planning, mathematics communication and metacognition, mathematical thinking and problem solving, technology in mathematics education. Teaching and learning of mathematics topics: Arithmetic, Mensuration and Geometry, Functions and Graphs, Statistics, Algebra, Trigonometry, Calculus, Probability, Sets, Matrices, Vectors, and Mechanics. Understanding of concepts in the topics, curriculum structure, learning difficulties, teaching approaches, motivation techniques for each of the topics will be dealt with. Hands-on sessions on the use of IT to teach mathematics.

### PCM514 Teaching and Learning of Mathematics II

Assessment in mathematics, test construction and marking. Project work and enrichment in mathematics at the secondary level. Classroom presentations of teaching ideas or practice of teaching skills, which will be critiqued by the tutor and fellow trainee teachers.

## The Teaching of Lower Secondary Mathematics

This subject is offered to trainee teachers who did not study Mathematics at university level but who possess at least grade 'B' in Mathematics C or Further Mathematics at 'A' level.

| Module Code | Title  | Module Category | No. of AUs | Pre-requisites |
|-------------|--|-----------------|------------|----------------|
| PCM521      | Principles and Practice of Teaching Lower Secondary Mathematics I  | Core            | 6          | -              |
| PCM522      | Principles and Practice of Teaching Lower Secondary Mathematics II | Core            | 2          | -              |

### **PCM521 Principles and Practice of Teaching Lower Secondary Mathematics I**

Aims and objectives of mathematics education, Mathematics curriculum in Singapore, concept formation and learning theories in mathematics, teaching approaches and classroom organisation, unit and lesson planning, mathematics communication and metacognition, mathematical thinking and problem solving, and technology in mathematics education. Teaching and learning of the following mathematics topics (including understanding of concepts within and related to the topics, curriculum structure, learning difficulties, teaching approaches and motivation techniques): Arithmetic, Mensuration and Geometry, Trigonometry, Algebra, Statistics, Functions and Graphs. Hands-on sessions on the use of IT to teach mathematics.



## **PCM522 Principles and Practice of Teaching Lower Secondary Mathematics II**

Assessment in mathematics, test construction and marking. Project work and enrichment in lower secondary mathematics. Classroom presentations of teaching ideas or practice of teaching skills which will be critiqued by the tutors and peers.

## The Teaching of Music

| Module Code | Title   | Module Category | No. of AUs | Pre-requisites |
|-------------|---|-----------------|------------|----------------|
| PCI511      | Principles and Foundations of Music Education | Core            | 5          | -              |
| PCI512      | Making Music in the Secondary Classroom       | Core            | 3          | -              |

### **PCI511 Principles and Foundations of Music Education**

Overview of fundamental issues in contemporary music education and classroom practice, the aims and objectives of general music curriculum and syllabus for the music elective programme in Singapore. Examine and evaluate the psychological theories and pedagogical principles about the teaching and learning of music and the role of technology, ethnic music, and sociological issues in music education.

### **PCI512 Making Music in the Secondary Classroom**

The repertoire of materials available for classroom use at secondary level. Methodologies to deliver a modern singing and instrumental curriculum; the ways in which classroom listening and composing activities are employed to promote music education through the acquisition of skills and involvement in a variety of musical experiences. Issues in the planning and evaluation of lessons.

## The Teaching of Physics

| Module Code | Title                   | Module Category | No. of AUs | Pre-requisites |
|-------------|-------------------------|-----------------|------------|----------------|
| PCP511      | Teaching of Physics I   | Core            | 2          | -              |
| PCP512      | Teaching of Physics II  | Core            | 4          | -              |
| PCP513      | Teaching of Physics III | Core            | 2          | -              |

### PCP511 Teaching of Physics I

An understanding of school pupils: individual differences in learning, diagnosis, and strategies to deal with different ability groups as represented in the Gifted, Express, Normal (Academic) and Normal (Technical) Streams. Dealing with critical incidents. Lectures on showmanship, creativity, thinking, inquiry, telling and explaining.

### PCP512 Teaching of Physics II

Comparing the present Physics curriculum with Physics curricula developed and implemented in other countries. The planning of physics lessons for maximum impact, the syllabus, curriculum materials and teaching strategies for pupils of different abilities. Remedial and enrichment programmes; research-based findings concerning alternative conceptions, difficulties and problems in various physics topics. Various approaches that facilitate the teaching, learning of physics: discover-inquiry learning, learning cycle, use of worksheets and discussions, individualised instruction, computer-assisted learning and classroom demonstrations. Infusion of the three initiatives namely, IT, Thinking skills and National Education into the teaching of physics.

### **PCP513 Teaching of Physics III**

Two important areas of Physics teaching, that of resource management and evaluation. Resources available to the classroom teacher, both within and outside the school. Safety in science laboratories, the role of practical work and its importance as an integral aspect of physics education. Evaluation and feedback on teaching efforts. Lectures on the setting, marking and analysing of examination papers for feedback to pupils.

## The Teaching of Tamil Language

| Module Code | Title                        | Module Category | No. of AUs | Pre-requisites |
|-------------|------------------------------|-----------------|------------|----------------|
| PCT511      | Teaching of Tamil Language 1 | Core            | 5          | -              |
| PCT512      | Teaching of Tamil Language 2 | Core            | 3          | -              |

### PCT511 Teaching of Tamil Language 1

The curriculum and methodology of teaching Tamil Language in secondary schools. The four language skills namely listening, speaking, reading and writing at the secondary level. The objectives, content and various approaches to teaching and testing the four skills. Integration of thinking skills in teaching of the above four skills. Use of IT in teaching of Tamil Language.

### PCT512 Teaching of Tamil Language 2

Two parts: the teaching of vocabulary and grammar, and language testing. The teaching of grammar and vocabulary at secondary level. A study of the functional aspects of Tamil grammar and various methods of teaching Tamil grammar and vocabulary. The principles of testing in Tamil language, definition and types of language tests, objectives of language testing, the principles of planning a language test and evaluation of performance in a test paper. High and low order thinking skills in testing.

## The Teaching of Tamil Literature

| Module Code | Title                          | Module Category | No. of AUs | Pre-requisites |
|-------------|--------------------------------|-----------------|------------|----------------|
| PCJ515      | Teaching of Tamil Literature 1 | Core            | 5          | -              |
| PCJ516      | Teaching of Tamil Literature 2 | Core            | 3          | -              |

### PCJ515 Teaching of Tamil Literature 1

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 Poetry and their importance in teaching of Tamil language at secondary level.

### PCJ516 Teaching of Tamil Literature 2

The teaching of Tamil language through the study of novels, short stories and essays. Various kinds of Tamil short stories and novels and the techniques used by writers. Various aspects of National Education in Tamil fiction and their importance in teaching of Tamil language at secondary level.

## PRACTICUM

| Module Code | Title     | Module Category | No. of AUs | Pre-requisites |
|-------------|-----------|-----------------|------------|----------------|
| PPR511❖     | Practicum | Core            | 0          | -              |

- ❖ Although the Practicum carries zero AUs, a trainee teacher must pass the Practicum before he/she can be awarded the PGDE.

### PPR511 Practicum

The Practicum is a very important part of the PGDE (Secondary) programme. Its principal function is to provide the trainee teachers with the opportunity to use knowledge and skills introduced in the Education Studies and Curriculum Studies courses and attempt to integrate theory into practice, and to develop teaching competencies in a variety of instructional contexts, and at different levels through close developmental supervision. They will learn from experienced cooperating teachers about the schooling process, and prepare themselves for their roles and responsibilities in teaching.

The Practicum is spread throughout the entire course of study. For the first semester, the trainee teachers will enjoy some school experience in secondary classes so that they can observe at first hand how teachers teach and students learn. During the second semester, trainee teachers will be sent out to schools for their teaching practice. They will be given the opportunity to teach their subjects of specialisation to students of different abilities at the upper and lower secondary levels.

## LANGUAGE ENRICHMENT AND ACADEMIC DISCOURSE SKILLS

Trainee teachers doing Teaching of Chinese Language will do PCU514/5. Trainee teachers doing Teaching of Malay Language will do PCU516/7 while trainee teachers doing Teaching of Tamil Language will do PCU518/9.

| Module Code | Title                        | Module Category | No. of AUs | Pre-requisites |
|-------------|------------------------------|-----------------|------------|----------------|
| PCU511      | Use of English in Teaching   | Core            | 0          | -              |
| PCU514      | Use of Chinese in Teaching 1 | Core            | 1          | -              |
| PCU515      | Use of Chinese in Teaching 2 | Core            | 1          | -              |
| PCU516      | Use of Malay in Teaching 1   | Core            | 1          | -              |
| PCU517      | Use of Malay in Teaching 2   | Core            | 1          | -              |
| PCU518      | Use of Tamil in Teaching 1   | Core            | 1          | -              |
| PCU519      | Use of Tamil in Teaching 2   | Core            | 1          | -              |

✉ This module is offered on a Pass/Fail basis. A Pass is required in order to fulfil programme requirements.

### Use of English in Teaching

#### PCU511 Use of English in Teaching

An oral communication course designed to improve the ability of trainee teachers to be more effective as communicators in the classroom. Various aspects of language communication commonly employed in the classroom and the modalities used to effect such communication. Aspects of speech, voice projection and modulation, effective techniques of reading text aloud, oral presentations and various modes of classroom talk.



## **Use of Chinese in Teaching**

### **PCU514 Use of Chinese in Teaching 1**

Development of the oral communication skills of student teachers. Three main sections: Phonetics, Speech Skills and Effective Classroom Communication. Errors in Mandarin pronunciation with regard to vowels and consonants, the four tones and the change of tone with specific words.

### **PCU515 Use of Chinese in Teaching 2**

How to be more effective in the use of Mandarin for the teaching of Chinese. Practical knowledge and skills in Hanyu Pinyin, accurate pronunciation and standard Mandarin. The application of speech skills in the classroom situation.

## **Use of Malay in Teaching**

### **PCU516 Use of Malay in Teaching 1**

Development of communicative proficiency in the use of Malay in secondary school. 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, debating skills.

### **PCU517 Use of Malay in Teaching 2**

Greater exposure and practice for trainee teachers to develop their proficiency and confidence as Malay language teachers in secondary school. Literacy in Jawi will be included.

### **Use of Tamil in Teaching**

#### **PCU518 Use of Tamil in Teaching 1**

Development of oral proficiency in Tamil language. Phonetics and mastery in pronunciation and other communication skills within the classroom.

#### **PCU519 Use of Tamil in Teaching 2**

Written communication skills. Common errors in writing and with Tamil syntax.