

**DIPLOMA IN EDUCATION (GENERAL) PROGRAMME**

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## CURRICULUM STRUCTURE FOR DIP ED (GENERAL) PROGRAMME

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The curriculum structure for this programme is shown in Table 2 below:

**Table 2: Curriculum Structure of Dip Ed (General) Programme**

### **Year 1**

Category/ Subject	Module Code	Title	No. of AUs
<b>EDUCATION STUDIES</b>			
	EED100	Introduction to Instructional Technology	2
	EED101	Introduction to Learning and Teaching	2
	EED102	Providing for Individual Differences in Learning and Teaching	2
<b>CURRICULUM STUDIES</b>			
English Language	ECE101	Teaching English at the Lower Primary Level I	3
	ECE102	Teaching English at the Lower Primary Level II	2
Mathematics	ECM101	Teaching and Learning of Primary Mathematics I	2
	ECM102	Teaching and Learning of Primary Mathematics II	2
<b>CURRICULUM STUDIES (Select either Art, Music, Social Studies or Science)</b>			
Art	ECA101	The Significance and Meaning of Children's Art	2
	ECA102	The Role of Drawing in Childhood	2
Music	ECI101	Classroom Skills in Music Teaching	2
	ECI102	Primary School Music	2
Social Studies	ECL101	Strategies for Teaching Social Studies	3
	ECL102	Field Techniques in Social Studies	1
Science	ECS101	Primary Science Curriculum and Teaching-Learning Processes	3
	ECS102	Assessment Modes and Resource Management in Primary Science	2

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Category/ Subject	Module Code	Title	No. of AUs
<b>CURRICULUM CONTENT</b>			
English Language	ETE101■	Introduction to Language	2
	ETE102◆	Language Development	2
Mathematics	ETM101	Topics related to Primary Mathematics I	2
<b>CURRICULUM CONTENT (Select 1 subject corresponding to the third Curriculum Studies subject)</b>			
Art	ETA101	A Developmental Approach to the Art Curriculum	2
Music	ETI101	General Musicianship I	2
Social Studies	ETL101	Selected Geography Topics for Primary Social Studies Teaching	2
Science	ETS101	Selected Topics for Primary Science (Biological Science)	2
<b>ACADEMIC SUBJECTS (Select 1 subject)</b>			
Biology	EAB101	Biodiversity in Natural Ecosystems	3
English Language	EAE101	Introduction to the Study of Language	3
Geography	EAG101	Physical Environmental Systems	3
History	EAH101	Film and Historical Fact	3
Mathematics	EAM101	Mathematics 1	3
Physics with Chemistry	EAP101	General Chemistry	3
<b>PRACTICUM</b>			
	EPR100	Practicum I	5
<b>LANGUAGE ENRICHMENT AND ACADEMIC DISCOURSE SKILLS</b>			
Use of English in Teaching	ELE101	Use of English in Teaching (Written Communication)	2

- For those not offering AS : English Language
- ◆ For those offering AS : English Language

## Year 2

Category/ Subject	Module Code	Title	No. of AUs
<b>EDUCATION STUDIES</b>			
	EED200	Social Context of Teaching and Learning	2
<b>EDUCATION STUDIES (Select 1)</b>			
	EED230	Assessment in Teaching and Learning	2
	EED231	Group Guidance in the Classroom	2
	EED232	Pupil Counselling in Primary Schools	2
	EED233	Developing Creativity in Children	2
	EED234	Strategies for Effective Teaching and Learning	2
	EED235	IT-based Tools for Constructivist Activities	2
	EED236	Creating Thinking Classrooms	2
	EED237	Teaching Discipline	2
	EED238	Teaching and Learning with the Internet	2
	EED239	Exploring the world of I-videos	2
	EED240	Teaching Mixed Ability Classes	2
	EED241	Catering to Pupils with Special Needs in the Primary School	2
	EED242	Learning and Individual Differences in the Classroom	2
	EED243	Strategies for Enhancing Pupils' Thinking and Learning	2
	EED244	Effective Curriculum Practice in Primary Schools	2
	EED245	Moral Issues in Cross-curricular Perspectives	2
	EED246	Instructional Message Design	2
	EED247	Thinking Skills to Enhance Learning	2
	EED248	Building School-Home Relationships for Enhancing Learning	2
	EED249	Instructional Multimedia Design	2
	EED250	Empowering Learners to Learn	2
	EED251	Motivational Web Design for Schools	2
	EED252	Project Work (PW): Understanding Process and Product	2
	EED253	Surviving and Thriving as a Beginning Teacher	2
<b>CURRICULUM STUDIES</b>			
English Language	ECE201	Teaching English at the Upper Primary Level I	3
	ECE202	Teaching English at the Upper Primary Level II	2
Mathematics	ECM201	Teaching and Learning of Primary Mathematics III	2
	ECM202	Teaching and Learning of Primary Mathematics IV	2
<b>CURRICULUM STUDIES (Further studies in subject taken in Year 1)</b>			
Art	ECA201	Children's Use and Organisation of Visual Media	2
	ECA202	Creativity, Thinking Skills and the Visual Arts	2
Music	ECI201	Further Classroom Skills in Music Teaching	2
	ECI202	Primary School Syllabus for Music	2

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Category/ Subject	Module Code	Title	No. of AUs
Social Studies	ECL201	Further Strategies for Teaching Social Studies	3
	ECL202	Using Alternative Assessment in Social Studies	1
Science	ECS201	Reflections on Primary Science Practices	3
<b>CURRICULUM CONTENT</b>			
English Language	ETE201■	Introduction to Text and Context	2
	ETE202◆	Literary Genres	2
Mathematics	ETM201	Topics related to Primary Mathematics II	2
<b>CURRICULUM CONTENT (Further studies in subject taken in Year 1)</b>			
Art	ETA201	Theories of the Development of Children's Art: Implications for Curriculum Planning	2
Music	ETI201	General Musicianship II	2
Social Studies	ETL201	Selected History Topics for Primary Social Studies Teaching	2
Science	ETS201	Selected Topics for Primary Science (Physical Science)	2
<b>ACADEMIC SUBJECTS (Further studies in subject taken in Year 1)</b>			
Biology	EAB201	Introduction to Cell and Molecular Biology	3
English Language	EAE201	Description of English	3
Geography	EAG201	Elements of Human Geography	3
History	EAH201	Fame and Biography in History	3
Mathematics	EAM201	Mathematics 2	3
Physics with Chemistry	EAP201	General Physics	3
<b>PRACTICUM</b>			
	EPR200	Practicum II	9
<b>LANGUAGE ENRICHMENT AND ACADEMIC DISCOURSE SKILLS</b>			
Use of English in Teaching	ELE202	Spoken English in Teaching	2

- For those not offering AS : English Language
- ◆ For those offering AS : English Language

**Note:** In addition to the core modules and the required number of prescribed electives, trainee teachers must offer a minimum of 2 academic units of general electives during the course of study. Trainee teachers are strongly encouraged to take these general electives in a semester which is not too heavy in terms of total number of AUs.

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## **CONTENT OF CORE MODULES & PRESCRIBED ELECTIVES**

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### **EDUCATION STUDIES**

This area of study will acquaint trainee teachers with the key concepts and principles in education that are necessary for effective instruction and reflective practice in primary or secondary schools. Contents of the core and prescribed modules deal with pupil development, the learning and thinking process, the social context within which schooling operates, the application of psychology in teaching and learning, and the use of instructional technologies.

There are four core modules for Education Studies which are compulsory as they deal with basic educational concepts. Trainee teachers will be required to choose one prescribed elective module from those offered. The prescribed elective modules are intended to provide trainee teachers with an opportunity for in-depth and rigorous study of some significant areas in the field of education. They also serve as a basis for the application of educational principles in a variety of instructional contexts.

## Education Studies

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	EED100	Introduction to Instructional Technology	Core	2	-
	EED101	Introduction to Learning and Teaching	Core	2	-
	EED102	Providing for Individual Differences in Learning and Teaching	Core	2	-
2	EED200	Social Context of Teaching and Learning	Core	2	-
	EED230	Assessment in Teaching and Learning	Prescribed	2	-
	EED231	Group Guidance in the Classroom	Prescribed	2	-
	EED232	Pupil Counselling in Primary Schools	Prescribed	2	-
	EED233	Developing Creativity in Children	Prescribed	2	-
	EED234	Strategies for Effective Teaching and Learning	Prescribed	2	-
	EED235	IT-based Tools for Constructivist Activities	Prescribed	2	-
	EED236	Creating Thinking Classrooms	Prescribed	2	-
	EED237	Teaching Discipline	Prescribed	2	-
	EED238	Teaching and Learning with the Internet	Prescribed	2	-
	EED239	Exploring the world of I-videos	Prescribed	2	-
	EED240	Teaching Mixed Ability Classes	Prescribed	2	-
	EED241	Catering to Pupils with Special Needs in the Primary School	Prescribed	2	-
	EED242	Learning and Individual Differences in the Classroom	Prescribed	2	-
	EED243	Strategies for Enhancing Pupils' Thinking and Learning	Prescribed	2	-
	EED244	Effective Curriculum Practice in Primary Schools	Prescribed	2	-
EED245	Moral Issues in Cross-curricular Perspectives	Prescribed	2	-	
EED246	Instructional Message Design	Prescribed	2	-	
EED247	Thinking Skills to Enhance Learning	Prescribed	2	-	
EED248	Building School-Home Relationships for Enhancing Learning	Prescribed	2	-	

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Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
2	EED249	Instructional Multimedia Design	Prescribed	2	-
	EED250	Empowering Learners to Learn	Prescribed	2	-
	EED251	Motivational Web Design for Schools	Prescribed	2	-
	EED252	Project Work (PW): Understanding Process and Product	Prescribed	2	-
	EED253	Surviving and Thriving as a Beginning Teacher	Prescribed	2	-

### **EED100 Introduction to Instructional Technology**

Learning, thinking and the effective use of instructional technologies to enhance teaching and learning in the classroom, integrating IT into the curriculum, evaluating and selecting appropriate IT resources, designing and creating IT-based materials for student-centered learning, promoting different kinds of learning through the effective use of web-based activities; and designing assessment tools for computer-mediated assignments.

### **EED101 Introduction to Learning and Teaching**

Aims, structure and new initiatives of the Singapore education system. Understanding the learner: conceptual, socio-emotional and moral development of children. Understanding learner differences: multiple intelligences, learning styles and pupils with diverse learning needs. Managing the processing and organization of knowledge. Planning for effective classroom management. Assessing pupil understanding through alternative modes of assessment.

## **EED102 Providing for Individual Differences in Learning and Teaching**

Challenging learners, enriching learning and fostering a thinking classroom culture. Motivating learners and facilitating learning through effective communication and a positive classroom climate. Examining classroom processes and different approaches to instruction: direct instruction, discovery and cooperative learning. Developing an affective curriculum. Accommodating diversity in the classroom: differentiating the curriculum for able learners and providing for children with special needs.

## **EED200 Social Context of Teaching and Learning**

School and society: the changing socio/economic environment in Singapore; the function of schools; the school as an agent of innovation and change. Key education policies: critical and creative thinking; national education; alternative assessment. Education in the new millennium: ability-driven education; the changing teaching/learning environment. Home influences on schooling: home background and educational attainment; strategies to assist children from deprived homes. Teaching as a profession: role and responsibilities of a professional. Authority and discipline.

## **EED230 Assessment in Teaching and Learning**

Role of assessment in the learning process; assessment practices in Singapore schools; basic knowledge and practical skills of monitoring and assessing pupils' learning; the 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 measurement; evaluation of teaching and learning.

## **EED231 Group Guidance in the Classroom**

Understanding group processes and group dynamics in the classroom; developmental group guidance to enhance learning and social functioning; enhancing teamwork and group cohesiveness; developing group norms; communication in groups; problem solving and conflict resolution in groups and the development of leadership.

## **EED232 Pupil Counselling in Primary Schools**

The principles and practice of guidance and counselling and its introduction to Singapore schools; psychological factors that may affect the development and learning of pupils; self-esteem and learning; mental health and stress management; identification and assessment of guidance needs; the helping relationship; different approaches to counselling children and basic counselling skills.

### **EED233 Developing Creativity in Children**

An introduction to theoretical frameworks and concepts in creativity literature and how these may be applied in the general as well as educational contexts. An Activity-based emphasis on learner participation. An interactive mode of instruction.

### **EED234 Strategies for Effective Teaching and Learning**

Careful planning for effective teaching and learning; the planning and implementation aspects of instruction; various instructional and learning strategies for implementation in the primary classroom; ways of active involvement of pupils in the learning process; teaching of thinking strategies as an integral part of the process of instruction.

### **EED235 IT-based Tools for Constructivist Activities**

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 IT tools to promote creativity and thinking; use of IT tools like semantic networking, multimedia authoring tools, office-productivity software and the Internet.

## **EED236 Creating Thinking Classrooms**

Obstacles to creating thinking classrooms; what kind of teacher are you? Mastering the loss of art of spin control; understanding the meaning and purpose of thinking classrooms; how to implement strategies to create a lively environment; using the art of deception in instilling an inquiring environment; the role of the imagination; review of successful strategies; creating the inquiring pupil.

## **EED237 Teaching Discipline**

A practical approach to teaching discipline. A variety of classroom management techniques. Ways of helping primary school children and whole classes learn personal responsibility for their behaviour and to judge between right and wrong. Insights from experienced as well as novice primary school teachers.

## **EED238 Teaching and Learning with the Internet**

Introduction of basic features of the Internet for educational purposes. Creating simple web-pages. Identifying, evaluating and designing learning activities using educational resources on the Internet. Emphasis on the design of web- based inquiry learning like those presented in WebQuest.

### **EED239 Exploring the world of I-videos**

Preparation of instructional video materials for constructivist learning. Planning, storyboarding, scripting, video digitizing, video-editing using simple editing software, adding of sub-titles. Video as a form of constructivist learning. Developing rubrics for evaluating video projects done by school pupils.

### **EED240 Teaching Mixed Ability Classes**

Biological, social, psychological and cultural factors influencing individual differences in learning; identification and assessment procedures; classroom management techniques; grouping and teaching strategies to cater to differences among pupils.

### **EED241 Catering to Pupils with Special Needs in the Primary School**

Issues and problems of pupils with special needs; slow learners, low achievers, underachievers, children with high intellectual potential; identification procedures; characteristics, causes; differentiated curricula, educational provisions and programmes in Singapore schools; teaching methods and strategies to enhance learning, and maximising pupil potential.

## **EED242 Learning and Individual Differences in the Classroom**

Biological, social, educational, psychological and cultural factors that may bring about individual differences in learners; identification, assessment and nature of such differences; and teaching strategies to cater to the different abilities and interests of learners.

## **EED243 Strategies for Enhancing Pupils' Thinking and Learning**

Cognitive and psychological factors affecting learning; the nature of thinking and types of thinking skills; the role of the teacher in creating conducive classroom environment to enhance thinking; metacognition and learning strategies; various approaches to the teaching of thinking skills and related programmes; teaching specific thinking skills to enhance learning; the assessment of thinking and learning.

## **EED244 Effective Curriculum Practice in Primary Schools**

Frameworks and concepts in curriculum; nature, scope, aims, structure and process involved in implementing the primary school curriculum in Singapore; theory and practice of the primary curriculum; curriculum assessment; improving curriculum implementation; emerging teacher roles in curriculum implementation.

### **EED245 Moral Issues in Cross-curricular Perspective**

Morality as subject and as process. How teachers educate for commitment, the will to act and the development of morally important skills. Curriculum subjects as sources for moral teaching. Extra-curricular subjects and moral development. Implications for primary school teaching in Singapore.

### **EED246 Instructional Message Design**

Basic principles of message design for the development of appropriate classroom materials. The use of computers to design effective instructional messages for different instructional purposes. Developing multi-media learning objects to be used to promote higher order thinking among learners.

### **EED247 Thinking Skills to Enhance Learning**

Cognitive and psychosocial aspects of thinking. Nature and types of thinking. Trainees sharpen their own thinking skills through interactive learning and hands-on activities in class. Trainees will examine the role of the teacher in creating a conducive learning environment in schools to enhance thinking and creativity. Teaching approaches and learning strategies that enhance thinking and creativity. Opportunities and guidance to develop lesson plans to infuse thinking into content teaching.

## **EED248 Building School-Home Relationships for Enhancing Learning**

Key concepts, issues and challenges in developing school-home partnerships as an adaptive response to changes in family and society; stakeholders in education; ideas and strategies for building positive and strong partnerships between the school and family; cross-cultural research on parental involvement in schooling; hands-on experience in researching parent-teacher perspectives and parent-teacher relationships in Singapore.

## **EED249 Instructional Multimedia Design**

The concepts of media, multimedia, and hypermedia. The relationship between multimedia, instructional method, and learning effectiveness. How to systematically design and develop instructional multimedia including how to select proper media and how to integrate multimedia into teaching and learning.

## **EED250 Empowering Learners to Learn**

Ways to encourage pupils to become self-directed learners. To learn smart rather than just to work hard. Issues that will help trainees and their pupils prepare themselves to be life-long learners by using opportunities provided by the technology, such as online and eLearning. Topics such as self-regulated learning strategies, metacognitive strategies, using IT as a mind tool, memory strategies, speed reading and note taking.

## **EED251 Motivational Web Design for Schools**

A good theoretical understanding and practical experience on how to conceptualise a motivational educational website incorporating pedagogical principles as well as web design elements. The creation of web materials for instructional purposes as well as school events such as exhibitions and Speech Day. Preferred entry level skills include intermediate user levels of design software.

## **EED252 Project Work(PW): Understanding Process and Product**

Understanding the PW initiative. Useful classroom management strategies and skills. Design of interdisciplinary project tasks as well as workable school practices suitable for primary schools. Plan and work out suitable project work topics based on various learning theories.

## **EED253 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 Teaching of Art (Primary)

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ECA101	The Significance and Meaning of Children's Art	Core	2	-
	ECA102	The Role of Drawing in Childhood	Core	2	-
2	ECA201	Children's Use and Organisation of Visual Media	Core	2	-
	ECA202	Creativity, Thinking Skills and the Visual Arts	Core	2	-

#### **ECA101 The Significance and Meaning of Children's Art**

This module traces the development of children's art from infancy through early childhood and the primary school years. It shows the meanings which children bring to and develop with art media. The module shows how children move through successive approaches or "modes" in their use of visual media. It is not generally understood that children's use of visual media (including painting, drawing and electronic media) forms a significant part of intellectual development. This course reveals and illuminates the phases of children's development in the arts and shows how each phase exhibits semantic and structural characteristics. Trainee teachers will be helped to identify modes of visual expression and representation unfolding in infancy and childhood, so that they are in a position to teach effectively.

## **ECA102 The Role of Drawing in Childhood**

This module will introduce students to the meaning of children's drawing and the contribution drawing makes to cognitive and affective development. Teaching implications will be considered. The module will consist of both theoretical and practical components.

## **ECA201 Children's Use and Organisation of Visual Media**

This module will show the meaning of children's art and how their development in art plays an important contribution to the development of intellectual and emotional life. The module will describe how children use both traditional art media and electronic media and the understandings they form in using these media. Implications for pedagogy will be discussed, focussing upon how children's development might best be fostered and encouraged by primary school teachers.

## **ECA202 Creativity, Thinking Skills and the Visual Arts**

This module shows the role art processes play during childhood and the primary school years in fostering and encouraging the growth of thinking skills and creativity. The contribution that art education plays in the development of cognition is generally little understood. This module describes recent research which shows that within children's exploration of art media children form, in addition to aesthetic understandings, linguistic and logicomathematical thinking. Given the opportunities and appropriate teaching, young children's art is a forum for an investigation of visual structure in relation to their ideas and feelings about the world. This investigation serves as a template for many later kinds of creative thinking.

## The Teaching of English Language

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ECE101	Teaching English at the Lower Primary Level I	Core	3	-
	ECE102	Teaching English at the Lower Primary Level II	Core	2	-
2	ECE201	Teaching English at the Upper Primary Level I	Core	3	-
	ECE202	Teaching English at the Upper Primary Level II	Core	2	-

### **ECE101 Teaching English at the Lower Primary Level I**

Focus on the teaching of English at the lower primary level. Examination of language learning and language needs in the Singapore educational context. Focus on acquisition of first and second languages and ways the home and school can help in laying a literary foundation for children. Introduction to shared reading, writing and comprehension teaching. Strategies for reading with phonics and teaching oral skills and thinking strategies at the lower primary level.

### **ECE102 Teaching English at the Lower Primary Level II**

Focus on current theories of reading and writing. Emergent writing and children's development in spelling and text genre awareness. Examination of evaluation and response to children's writing at the lower primary level.

## **ECE201 Teaching English at the Upper Primary Level I**

Focus on the teaching of English at the upper primary level. The teaching of reading (non-fiction); the place of grammar teaching in Singapore; the study of different genres and text types; language teaching and learning across the curriculum; ways of maximizing the use of non-fiction to teach Reading and Language for Information; communicative and literature based activities to promote and enhance oral and listening skills; thematic and integrated approaches to language teaching and learning.

## **ECE202 Teaching English at the Upper Primary Level II**

Focus on the integrated Language Arts curriculum at the upper primary level. Practice and guidance in planning integrated thematic units at a macro level, and in planning lessons at a micro level. The teaching of the narrative text type, vocabulary and writing.

## The Teaching of Mathematics

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ECM101	Teaching and Learning of Primary Mathematics I	Core	2	-
	ECM102	Teaching and Learning of Primary Mathematics II	Core	2	-
2	ECM201	Teaching and Learning of Primary Mathematics III	Core	2	-
	ECM202	Teaching and Learning of Primary Mathematics IV	Core	2	-

### ECM101 Teaching and Learning of Primary Mathematics I

Overview of the aims, framework, teaching approaches of the Primary Mathematics curriculum. Psychological theories of teaching and learning mathematics and formation of mathematics concepts. Preparation of scheme of work and lesson plans. Pedagogical principles of mathematics teaching including the use of class exposition and various teaching strategies. The purpose and use of abacus, drill and practice in primary mathematics. The teaching of whole numbers, fractions, decimals, percent, ratio and proportion\*.

### ECM102 Teaching and Learning of Primary Mathematics II

Nature of mathematical thinking. Polya's model. Various heuristics for problem solving, including the "model" approach. Hands-on experience in explaining specific Mathematics concepts and procedures to enable trainee teachers to teach Mathematics effectively. The teaching of algebra, rate and speed.

## **ECM201 Teaching and Learning of Primary Mathematics III**

Mathematical communication in the classroom. Testing theories for mathematical assessment and their application to construction of mathematics tests. Alternative forms of assessment in mathematics. Task analysis and error analysis. Teaching of the low ability pupils. Techniques and procedures for diagnosing pupils with mathematical difficulties. General and specific remedial strategies for helping pupils with mathematical difficulties. The teaching of money, measure and mensuration.

## **ECM202 Teaching and Learning of Primary Mathematics IV**

Techniques and procedures for mathematical investigation and enrichment activities. Techniques for assessing higher level mathematical thinking. Teaching of the gifted and high ability pupils. The teaching of geometry, graphical representation and statistics.

*\* The teaching of the various mathematics topics will include discussion of the concepts, the appropriate learning theories and pupil difficulties, the use of suitable approaches, strategies and media such as the use of manipulatives, teaching aids, information technology (software and internet), games, worksheets etc. Techniques for developing higher order thinking skills will also be included within the teaching of the topics.*

## The Teaching of Music (Primary)

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ECI101	Classroom Skills in Music Teaching	Core	2	-
	ECI102	Primary School Music	Core	2	-
2	ECI201	Further Classroom Skills in Music Teaching	Core	2	-
	ECI202	Primary School Syllabus for Music	Core	2	-

### **ECI101 Classroom Skills in Music Teaching**

The musical skills needed for the effective teaching of music in Singapore primary schools. The Kodaly hand signs, the rhythm names and basic recorder techniques. A study of the aims, objectives and philosophies of music education in Singapore and elsewhere.

### **ECI102 Primary School Music**

The wider issues in music education especially with the notion of music as aesthetic education. The opportunities for children to be involved in music as a practical, creative and expressive art form.

## **ECI201 Further Classroom Skills in Music Teaching**

A further development of the musical skills needed for the effective teaching of music in Singapore primary schools and further study of the aims, objectives and philosophies of music education in Singapore and elsewhere.

## **ECI202 Primary School Syllabus for Music**

The Music syllabus that is currently being taught in Singapore primary schools. A study of the rationale, background and philosophy of the Music curriculum together with practical experience of the musical materials used. Lesson planning, presentation and evaluation.

## The Teaching of Science

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ECS101	Primary Science Curriculum and Teaching-Learning Processes	Core	3	-
	ECS102	Assessment Modes and Resource Management in Primary Science	Core	2	-
2	ECS201	Reflections on Primary Science Practices	Core	3	-

### **ECS101 Primary Science Curriculum and Teaching-Learning Processes**

The goals, and objectives of the primary science curriculum. The nature of science, scientific inquiry and learning. An analysis of the syllabus, science textbooks, and other curricular materials. The specific disciplines, concepts, language, symbols, skills, techniques and means of communication. Various principles and methods of teaching primary science, e.g. concept formation, concept mapping, use of science process skills, inquiry learning, problem solving and investigative activities, group work and individual methods of teaching.

## **ECS102 Assessment Modes and Resource Management in Primary Science**

The organisation, management and use of teaching aids and resources in primary science teaching-learning. Formal methods of assessment of pupil learning in primary science. The underlying concepts and principles of assessment, construction and use of different modes of assessment, table of specifications, use of multiple choice, short answer and essay questions, assessment of science process skills in written tests, analysis of test results for evaluative and diagnostic purposes.

## **ECS201 Reflections on Primary Science Practices**

The teaching of science at the upper primary level. Critical review and reflection on students' teaching experiences in areas such as the use of science projects and pupils' ideas in science learning. The development of intervention strategies for implementing diagnostic, remedial, and enrichment programmes in primary science. Use of computer software and Internet resources for science teaching in primary schools. The use of practical tests and other methods of assessment of pupil learning.

## The Teaching of Social Studies

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ECL101	Strategies for Teaching Social Studies	Core	3	-
	ECL102	Field Techniques in Social Studies	Core	1	-
2	ECL201	Further Strategies for Teaching Social Studies	Core	3	-
	ECL202	Using Alternative Assessment in Social Studies	Core	1	-

### **ECL101 Strategies for Teaching Social Studies**

Introduction to goals and scope of social studies education. Familiarisation with Singapore's social studies curriculum. Classroom-based strategies for teaching social studies concepts and values. Organisation of learners for co-operative group work. Interactive pupil-centred activities for learning social studies. Information-gathering skills. Unit and lesson planning for effective learning and formal and informal assessment in social studies.

### **ECL102 Field Techniques in Social Studies**

Introduction to field methods in social studies. Use of fieldwork and oral interviews in the inquiry process. Historical and geographical heritage of Singapore explored through practical conduct of fieldwork and oral interviews.

## **ECL201 Further strategies for teaching Social Studies**

Strategies to promote critical and creative thinking in pupils. Picture discussion, story-telling and other approaches to teaching social studies to lower primary pupils. Strategies to teach history and geography skills. Teaching differentiated learners. Integrating IT in social studies. Selection and development of resources.

## **ECL202 Using Alternative Assessment in Social Studies**

Introduction to alternative assessment modes, authentic assessment. The inquiry approach and use of project work and group investigation. Assessing group and individual performance using portfolios and performance-based assessment. The use of observation checklists, peer assessment and learning logs. Developing and writing evaluation rubrics.

## CURRICULUM CONTENT

### Art

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ETA101	A Developmental Approach to the Art Curriculum	Core	2	-
2	ETA201	Theories of the Development of Children's Art: Implications for Curriculum Planning	Core	2	-

#### **ETA101 A Developmental Approach to the Art Curriculum**

This approach to the teaching of art to young children is designed with reference to processes of human development. Trainee teachers will learn how to design art experiences for young children which will promote and encourage intellectual and emotional development.

#### **ETA201 Theories of the Development of Children's Art: Implications for Curriculum Planning**

This module will consist of introductions to classical and contemporary theories of children's development in the visual arts. This module will give trainee teachers understand various theoretical frameworks and how these underpin particular approaches to pedagogy and classroom practice.

## English Language

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ETE101	Introduction to Language	Core	2	For trainee teachers not offering AS: English Language
	ETE102	Language Development	Core	2	For trainee teachers offering AS: English Language
2	ETE201	Introduction to Text and Context	Core	2	For trainee teachers not offering AS: English Language
	ETE202	Literary Genres	Core	2	For trainee teachers offering AS: English Language

### ETE101 Introduction to Language

The basic sounds of English and their use in transcribing English words. Morphology and word classes. The structure of sentences, and the form and function of phrases and clauses.

### ETE102 Language Development

Introduction to the development of language in early childhood. Readings from key researchers who have shaped our understanding of language development and communication. Links between theory and the classroom.

## **ETE201 Introduction to Text and Context**

Theoretical basis for genre or 'text-types' featured in the 2001 Singapore English Syllabus. Introduction to a (Hallidayan) view of oracy and literacy where meaning-making activity is shaped by the social, functional context and determined by user choice. Examination of literary texts (e.g. ballads, fables) and how social purpose determines mode, register, lexical choice, organisational and grammatical structures. Genre knowledge related to content learning and reading/writing development.

## **ETE202 Literary Genres**

Approach to critical understanding of literature with specific reference to poetry and narrative. Focus on aspects like form, imagery, tone, diction, rhythm and other major concepts needed for reading and responding to poems. Focus on elements of fiction like plot, point of view, characterization, symbolism, setting and theme in relation to long and short narratives as well as children's fiction.

## Mathematics (Primary)

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ETM101	Topics Related to Primary Mathematics I	Core	2	-
2	ETM201	Topics Related to Primary Mathematics II	Core	2	-

### ETM101 Topics Related to Primary Mathematics I

Historical numeration systems, numeration systems in different bases, number systems and operations. Basic concepts in number theory and divisibility. Proportional reasoning and algebraic concepts.

### ETM201 Topics Related to Primary Mathematics II

Concepts in statistics, data representation, measure of central tendency, standard deviation. Selected topics in geometry and mensuration.

## Music (Primary)

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ETI101	General Musicianship I	Core	2	-
2	ETI201	General Musicianship II	Core	2	-

### **ETI101 General Musicianship I**

Concerned with the formation and development of the student teacher's basic musicianship skills as applied to music teaching - listening, responding, analysing, performing and creating music. Included are areas such as instrumental (includes recorder and keyboard skills) and vocal techniques.

### **ETI201 General Musicianship II**

Concerned with the formation and development of general musicianship skills towards analysing and diagnosing appropriate instructional goals, objectives, music teaching strategies and teaching materials for the primary school. Included are areas such as music & movement, elementary conducting and rehearsal techniques and improvisation/ composition techniques.

## Science

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ETS101	Selected Topics for Primary Science (Biological Science)	Core	2	-
2	ETS201	Selected Topics for Primary Science (Physical Science)	Core	2	-

### **ETS101 Selected Topics for Primary Science (Biological Science)**

This module deals with the theoretical and practical aspects of topics in Biological Science from the new Primary Science Curriculum. The topics to be discussed include: classification and diversity of organism, structure and functions of plant and animal systems, reproduction and life cycles, ecology and environmental issues.

### **ETS201 Selected Topics for Primary Science (Physical Science)**

This module deals with the theoretical and practical aspects of Physical Science topics selected from the new Primary Science Curriculum. The topics include: matter and materials, forms of energy and conversions, heat, light and the solar system, magnetism and electricity, and forces and simple machines.

## Social Studies

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	ETL101	Selected Geography Topics for Primary Social Studies Teaching	Core	2	-
2	ETL201	Selected History Topics for Primary Social Studies Teaching	Core	2	-

### **ETL101 Selected Geography Topics for Primary Social Studies Teaching**

An in-depth study of selected geography topics in the primary social studies curriculum. Topics such as the physical environment; weather and natural vegetation of Singapore; constraints of a small island state; social, economic and political developments; conservation and preservation of natural and cultural heritage; the dependence and interdependence of nations and regions will be discussed. Some relevant geographical skills such as map reading and photo interpretation skills will be included.

### **ETL201 Selected History Topics for Primary Social Studies Teaching**

An overview of the history of modern Singapore. Issues such as the strategic importance of Singapore, the coming of the British, the development of our trading economy, the fall of Singapore, our struggle for self-government and independence as well as our political and economic transformation after 1965 will be discussed. The course will also include the handling and interpreting of original sources and original documents.

## ACADEMIC SUBJECTS

### Biology

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	EAB101	Biodiversity in Natural Ecosystems	Core	3	-
2	EAB201	Introduction to Cell and Molecular Biology	Core	3	-

#### **EAB101 Biodiversity in Natural Ecosystems**

Structural organisation of living organisms as they increase in complexity from lower to higher forms; Biological adaptation and phylogenetic relations among the major groups of organisms (microorganisms, plants and animals). Different ecosystems especially the tropical rainforest, mangrove habitat, rocky shore, coral reefs and the study of the different organisms and their interactions in these ecosystems.

#### **EAB201 Introduction to Cell and Molecular Biology**

Cells as the basic units of life; building blocks: proteins, carbohydrates, fats, nucleic acids cell; Viruses, Structure and organization of prokaryotic and eukaryotic cells; Structure and function of plasma membrane, chloroplast, mitochondria, lysosomes, cytoskeleton and other organelles; Cellular reproduction; nature of gene and the genome; nucleus and gene expression; DNA replication and repair, Cell signalling; Cancer.

## English Language

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	EAE101	Introduction to the Study of Language	Core	3	-
2	EAE201	Description of English	Core	3	-

### **EAE101 Introduction to the Study of Language**

Introduction to core areas in the study of English. The classification of the sounds of English and their use in basic transcription. Morphology and word classes. The structure of sentences, and the form and function of phrases and clauses.

### **EAE201 Description of English**

The pronunciation and intonation of English in context. Introduction to functional grammar: How information structure, semantic roles and interpersonal relations interact with formal grammatical categories to produce coherent texts in English.

## Geography

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	EAG101	Physical Environmental Systems	Core	3	-
2	EAG201	Elements of Human Geography	Core	3	-

### **EAG101 Physical Environmental Systems**

Description and explanation of the processes operating in the earth's interior, on the earth's surface (and resultant landforms) and in the atmosphere. Understanding of the Earth as a multi-dimensional system, the important interrelationships within the earth's atmosphere, lithosphere, hydrosphere, and biosphere

### **EAG201 Elements of Human Geography**

Basic concepts of the human-environment tradition and regional studies approach in the explanation of human behaviour, activities and phenomena in space. Geographical approach in understanding human, habitat and society. Characteristics of regions, rural and urban settlement patterns. World patterns and trends in population growth and distribution, and resource problems.

## History

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	EAH101	Film and Historical Fact	Core	3	-
2	EAH201	Fame and Biography in History	Core	3	-

### **EAH101 Film and Historical Fact**

How accurate are films claiming to be historically true? This module examines several case studies in probing this question. It also deals with the question of whether films need to be historically accurate. A range of well-known examples of films claiming to represent the past are assessed for their historical accuracy.

### **EAH201 Fame and Biography in History**

The biographies of famous individuals and influential historical figures from mainly the twentieth century are studied. Infamous personalities are also examined. The lives of not so famous individuals are covered. Autobiographies and memoirs enrich our understanding of the past. Insights into history from above and history from below.

## Mathematics

Subject Requirements:

Pass in Mathematics (Syllabus C) or Further Mathematics at 'A' Level in the GCE 'A' Level Examination or its equivalent;

Polytechnic Diploma holders who do not meet the requirements as specified above may, at the discretion of the Head of Mathematics & Mathematics Education Academic Group, be allowed to read the subject based on relevant subjects passed at the polytechnic diploma courses.

Year	Module Code	Title	Module Category	No. of AUs	Pre-requisites
1	EAM101	Mathematics 1	Core	3	-
2	EAM201	Mathematics 2	Core	3	-

### **EAM101 Mathematics 1**

Functions and graphs. Limits and continuity. Derivatives, techniques of differentiation and their applications. Integrals, techniques of integration and their applications. Introduction to differential equations and some applications. Introduction to and uses of a Computer Algebra System.

### **EAM201 Mathematics 2**

Counting methods: basic principles, permutations and combinations, generalised permutations and combinations, binomial coefficients and combinatorial identities, the pigeon-hole principle. Basic concepts in probability: sample space, conditional probability.

## Physics with Chemistry

### Subject Requirements:

Pass in Physics and Chemistry or in Physical Science preferably with a grade C6 or better at the GCE 'O' Level Examination or its equivalent;

Polytechnic Diploma holders who do not meet the requirements as specified above may, at the discretion of the Head of Natural Sciences Academic Group, be allowed to read those subjects based on relevant subjects passed at the polytechnic diploma courses.

Year	Module code	Title	Module Category	No. of AUs	Pre-requisites
1	EAP101	General Chemistry	Core	3	-
2	EAP201	General Physics	Core	3	-

### EAP101 General Chemistry

*The basics of atomic and molecular structure:* Atomic structure and properties, electronic configurations of elements and periodic properties. Chemical bonding: simple qualitative treatment of valence-bond and molecular orbital theories. VSEPR theory and molecular shapes.

*Reaction Stoichiometry and Equilibria:* Introduction to chemical equilibria; redox reactions; acid-base reactions and their applications in everyday life and in industries.

*Simple organic compounds:* The hydrocarbon framework, structure and nomenclature; hybridisation and single, double and triple bonds; geometric isomerism; conjugation and aromaticity.

## EAP201 General Physics

*Mechanics:* Simple vector algebra applied to kinematics. Newton's laws of motion. 2-dimensional motion. Collisions and conservation of linear momentum. Work and energy Conservation of energy.

*Thermal Physics:* Thermometry and thermal expansion. The ideal gas law and real gases. Heat as a form of energy. Specific heats of substances. Changes of phase and latent heat. Heat transfer. Work and the first law of thermodynamics. Heat engines and heat pumps.

*Light and Optics:* Fermat's principle. Laws of reflection and refraction. Reflection and refraction at plane and curved surfaces. Dispersion and the prism – spectroscopy. Thin lenses. The eye and optical illusions. Simple optical instruments: magnifier and camera.

*Electricity and Magnetism:* Concept of electric charge and charge conservation. Coulomb's law of force. The electric field and electric potential. Capacitance. Electric current: Simple circuits. Magnetism: Electric current and magnetism.

## PRACTICUM

Year	Module code	Title	Module Category	No. of AUs	Pre-requisites
1	EPR100	Practicum I	Core	5	-
2	EPR200	Practicum II	Core	9	-

### **EPR100 Practicum I**

This first module is designed to facilitate the trainee teacher's induction into a school setting and to provide opportunities for him/her to carry out classroom teaching and other instructional-related tasks. By observing and working closely with the school's cooperating teacher in structured classroom activities, the trainee teacher will learn basic teaching and classroom management skills and acquire appropriate professional attitudes and values that can be expected of school teachers.

### **EPR200 Practicum II**

This module will expose the trainee teacher to further opportunities of teaching and managing pupils for the subjects that he/she has been trained to teach. By this stage of professional training, the trainee teacher will be exposed to the multi-faceted role of the teacher, such as planning, instructing, managing and assessing pupils' learning, as well as having some practice in using appropriate enrichment and remedial learning activities for target pupils in classrooms.

## **LANGUAGE ENRICHMENT AND ACADEMIC DISCOURSE SKILLS**

### **Use of English in Teaching**

<b>Year</b>	<b>Module Code</b>	<b>Title</b>	<b>Module Category</b>	<b>No. of AUs</b>	<b>Pre-requisites</b>
1	ELE101	Use of English in Teaching (Written Communication)	Core	2	-
2	ELE202	Spoken English in Teaching	Core	2	-

#### **ELE101 Use of English in Teaching (Written Communication)**

Written communication in the context of situations that teachers are likely to encounter in their professional capacity. Knowledge of and practice in conventions of professional written communication, using a process-driven approach based on prewriting, drafting, revising and editing, sharing and publishing. Use of language appropriately in producing clear, grammatically acceptable, and stylistically suitable writings.

#### **ELE202 Spoken English in Teaching**

Development of effective oral communication skills in instructing, explaining, questioning and responding as well as in reading aloud prose and poetry to children. Focus on effective articulation, including pronunciation, rhythm, stress and intonation, as well as non-verbal skills such as gesture and vocal tone.

## **GENERAL ELECTIVES**

In addition to the core modules and the required number of prescribed electives, Dip Ed (General) trainee teachers must offer a minimum of 2 academic units of general electives which can be chosen from subjects offered by the Institute.