# Professional Learning at NIE

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The National Institute of Education, Singapore believes in lifelong learning. In alignment with NIE’s mission to excel in Teacher Education, the range of professional development programmes and courses offered by NIE to meet the needs of our various stakeholders is instrumental in enabling the fulfilment of this mission. In addition, one main feature of NIE’s Teacher Education Model of the 21st Century is the consideration of teachers’ needs on an enhanced pathway of Professional Learning (PL). We believe our professional learning programmes for teachers are instrumental in meeting teachers’ aspirations.

Our programmes are tailored to the learning needs of school teachers as well as educators and professionals working in various educational settings. In particular, we have six focus areas in our programmes and courses to:

1. **UPGRADE** content knowledge of teachers;
2. **UPDATE** teachers with pedagogical innovations in subject teaching;
3. **EQUIP** teachers with new competencies in response to societal needs and demands;
4. **KEEP** teachers abreast of new developments and initiatives in education;
5. **EDUCATE** teachers with research and management skills;
6. **ENHANCE** their teaching effectiveness through life-long learning.

These areas of focus will enable our teachers to advance and master the set of Teacher Competencies they have attained since their graduation from their initial teacher preparation programmes. In addition, these programmes are also designed with the Ministry of Education’s (MOE) Teacher Growth Model (TGM) in mind, providing learning opportunities for the ethical educator, the competent professional, the collaborative learner, the transformational leader and the community builder. We continue to provide quality teaching and learning to enable our teachers in their learning journeys through three key modes of PL.

### CERTIFICATION PROGRAMMES

NIE offers a suite of Certificates, Diplomas, and Advanced Diplomas that cater to the range of professional needs of Singapore educators. These structured programmes are grounded in continuing, life-long learning principles to meet the career needs of practising teachers and educational professionals in a changing education sector.

### STAND-ALONE PROFESSIONAL LEARNING COURSES

Apart from Certification programmes, NIE offers two categories of stand-alone PL courses. These can be generic in-service courses designed in response to contemporary policy, curriculum and pedagogy that are relevant to teachers’ aspirations and the mission of MOE. Another type of stand-alone course is the in-service course taught at a graduate level that provides learning experiences to teachers. This is done on a ‘modular’ basis to enable them to learn at their own pace, without first having to register for a master’s programme. This enables teachers to accumulate academic credits for consideration of admission to higher certification programmes.

### CUSTOMISED WORKSHOPS

In addressing the needs of our stakeholders, NIE often responds to requests from educators to run customised workshops. In order to provide to prospective educators who require customised training, we have included a section on the areas of learning for customised school-based workshop in this catalogue.

In short, NIE is committed to providing relevant, responsive, rigour-tested, practice-proven, evidence-informed and technology-mediated knowledge solutions and innovations in educational policy, process and practice to meet organisations’ and individuals’ professional needs.
CERTIFICATION PROGRAMMES

CERTIFICATES
Certificate in Special Needs Support
This programme serves to provide mainstream teachers in the primary and secondary schools with more in-depth knowledge, skills and understanding of the special needs of diverse learners and foster the development of teachers’ education.

Certificate in Educational Support
This programme aims to deepen the professional knowledge and skills of participants in relation to (a) supporting the specific socio-emotional needs of the low progress learners, and (b) supporting the specific learning needs of the low progress learners. It is designed to meet the key learning areas in the Professional Development Roadmap for Secondary School Teachers - Teaching Low Progress Learners, namely: “characteristics of low progress learners and social-emotional learning/TSR strategies”, “motivation and education and career guidance” and “pedagogical practices”.

Certificate in Primary Mathematics Education
This programme aims to prepare the teachers for specialising in primary mathematics teaching at the upper primary level, with emphasis on the topics that are taught in the primary mathematics curriculum. Each course will also examine the related assessment practices based on the subject matter knowledge of the topic.

Certificate in Primary Science Education
This programme aims to equip teachers with knowledge and understanding of biological and physical science topics, and how the topics are connected to each other. In addition, the courses will equip teachers with the knowledge and skills in planning and implementing holistic assessment in primary science.

DIPLOMAS
Diploma in Educational Psychology
This programme is intended as an initial in-service training to prepare the Associate Psychologists (A/Psyp) for their role in MOE. Upon completion of the programme, A/Psyp are expected to be able to develop and implement appropriate school-based assessments to evaluate pupils’ progress, vis-a-vis educational, social and learning outcomes. They will design and implement intervention programmes to meet students’ learning, social-emotional, and behavioural needs. In consultation with Educational Psychologists, they will conduct assessments of children’s special educational needs, and provide advice to schools on strategies to support children’s special educational needs.

Diploma in Physical Education (In-service)
This programme seeks to develop professional competence and expertise in teaching Physical Education as a major subject. It seeks to enable teachers to follow an academic and knowledge-based approach to the subject area of Physical Education. The programme aims to give teachers a grasp of the physical, psychological, sociological and philosophical principles essential to an understanding of the physical education teaching process.

ADVANCED DIPLOMAS
Advanced Diploma in Primary Art Education
This programme provides teachers with a framework of knowledge and skills in art. It also provides perspectives on the change and development of theories and trends in art and art education for teachers to reflect, re-examine and to draw inferences about their classroom practices. Lastly, it enables teachers to develop competencies in the evaluation and planning of effective art curriculum and programme in their schools.

Advanced Diploma in Primary English Language Education
This programme provides teachers with a framework of knowledge and skills in teaching primary English language. It also provides perspectives on the change and development in the primary English language curriculum for teachers to reflect, re-examine, and refine their classroom practices. Lastly, it enables teachers to develop competencies in the design and practice of assessment and evaluation.

Advanced Diploma in Primary Mathematics Education
This programme provides teachers with a framework of knowledge and skills in the teaching of primary mathematics. It also provides perspectives on the change and development in primary mathematics curriculum for teachers to reflect re-examine and refine their classroom practices. Lastly, it enables teachers to develop competencies in the design and practice of assessment and evaluation.

Advanced Diploma in Primary Science Education
This programme provides teachers with a framework of knowledge and skills in the teaching of primary science. It also provides perspectives on the changes and developments in the primary science curriculum for teachers to reflect, re-examine and refine their classroom practices. Lastly, it enables teachers to develop competencies in the design and practice of assessment and evaluation.

Advanced Diploma in Primary Music Education
This programme provides teachers with a framework of knowledge and skills in music. It appraises music teachers of the current thinking and practice in Music and Music Education and provides opportunities for teachers to reflect on and re-examine their classroom practices. Lastly, it enables teachers to develop competencies in the evaluation and planning of effective music curricula and programmes in their own schools.

Advanced Diploma in Special Learning and Behavioural Needs
This programme provides teachers with a framework of knowledge and skills which are important to the education of students with special needs. It also examines the range of factors that facilitates or hinders the learning of a student with special needs in mainstream schools; thus enabling teachers to develop competencies in assessing, planning, implementing, and evaluating programmes for students with special needs. Lastly, the programme provides teachers with the basic knowledge and skills for supporting students with various types of disabilities.
Advanced Diploma in Teaching Early Primary School Years
Closely coordinated with various MOE initiatives, this programme seeks to develop professional competence and expertise in teaching lower primary children. It will help teachers understand how children learn and develop, and thus create a learning environment that keeps children safe as well as support engaging activities that promote quality learning. Teachers will develop effective and age-appropriate strategies to promote children’s learning; understand goals, benefits and uses of systematic observations and varied forms of assessment to impact the development of children. They will learn to understand strategies of family and community engagement to promote positive learning outcomes for children, deepen their understanding of how children’s language skills and numeracy develop in the lower primary and develop engaging teaching and learning activities to foster these skills. Lastly, they will broaden their leadership potential and expand their professional confidence and impact as teacher leaders.

Advanced Diploma in Special Education
This programme focuses on enhancing the capacities, skills and practices of the Allied Educators (Learning and Behavioural Support) and Special School Teachers using a “reflective-practitioner” and “learning-based” approach to develop appropriate classroom-based and school-level supports for pupils with special needs in mainstream or special schools.

Advanced Diploma in Teaching
The purpose of this Advanced Diploma in Teaching is to offer the opportunity to customise your own learning, based on your instructional needs and interests in different schools; and across at least two subject areas within the primary school curriculum. It also offers a greater scope of elective courses otherwise unavailable within disciplinary Advanced Diplomas.

MAPPING TO THE TEACHERS’ GROWTH MODEL
Our courses are mapped to the Teachers’ Growth Model’s learning dimensions. You will find the respective learning dimensions number right below the course titles together with the TRAISI code, where applicable.
STAND-ALONE PROFESSIONAL LEARNING COURSES OFFERED IN JULY – DECEMBER 2018

ICT0216 Differentiated Instruction (DI) in Secondary Subject-Based Banding (SBB) for SBB Teachers
(TRAISI Code: 72813)

Duration:
7 hours

Dates:
• 1st run - 3 July 2018
• 2nd run - 27 July 2018

Time:
9.00am to 5.00pm

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $75.90
• Non-MOE participants - $582.75

This workshop provides SBB teachers with an overview of Differentiated Instruction (DI), with its key principles and components as well as have an understanding of the role of teachers within it.

Trainer:
Ms Lucy Fernandez

Target audience:
All educators

Learning dimensions:
1 2 3 4

ICT0306 Assessment Literacy 2.1: Assessment and Learning
(TRAISI Code: 50622)

Duration:
10 hours

Dates:
3 and 7 July 2018

Time:
• 9.00am to 5.00pm  (3 July 2018)
• 2.30pm to 5.30pm  (17 July 2018)

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $108.00
• Non-MOE participants - $803.50

The course is designed for teachers who already have some knowledge and/or tried out formative assessment (or Assessment for Learning) strategies in their classrooms. The focus of this course is on helping teachers to support other teachers’ works in classroom assessment, bearing in mind that quality assessment practices involve not just being able to attend to either formative or summative assessment exclusively. Also, classroom assessment may be very different for different subject teachers and profile of students.

Trainer:
Dr Rozi Rahmat

Target audience:
All educators

Learning dimension:
3
### ICT0324 Nurturing Self-Regulated Learners through Assessment Practices Assessment Practices

**TRAISI Code:** 72763  
**Duration:** 10 hours  
**Dates:** 4 July and 1 August 2018  
**Time:**  
- 0.00am to 5.00pm (4 July 2018)  
- 2.30pm to 5.30pm (1 August 2018)  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $108.00  
- Non-MOE participants - $803.50  
**Target audience:** All educators  
**Learning dimension:**  
- 3  
- 4  

This workshop hopes to provide teachers with a better understanding about self-regulated learning (SRL). It will focus especially on shaping classroom assessment practices to nurture SRL, as well as discuss the complexities involved as. There will also be many hands-on opportunities for teachers to plan for application of course content in their lessons.

**Trainer:** Dr Tay Hui Yong

### ICT0320 Assessment Literacy 2.4: Effective Questioning & Feedback as AfL Strategies

**TRAISI Code:** 72245  
**Duration:** 10 hours  
**Dates:** 5 and 26 July 2018  
**Time:**  
- 0.00am to 5.00pm (5 July 2018)  
- 2.30pm to 5.30pm (26 July 2018)  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $108.00  
- Non-MOE participants - $803.50

The course is designed to build teachers’ capacity in the areas of questioning and feedback, two important assessment for learning (AfL) strategies. Using research-informed best practices, participants explore and apply questioning and feedback within authentic contexts. While focusing on enhancing teachers’ use of AfL strategies, the course examines how participants may plan the conditions for ideal questioning and feedback practices. Through discussion, hands-on and reflective activities, participants will enhance their knowledge and skills in using Q&F strategies to support and evaluate teaching and learning. AfL practices and understandings will be set within the context of MOE Assessment Philosophy and assessment competencies.

**Trainer:** Dr Rozi Rahmat

### ICT0325 Assessment Literacy 2.3 - Designing Quality Alternative Assessments and Associated Rubrics

**TRAISI Code:** 73209  
**Duration:** 10 hours  
**Dates:** 9 and 30 July 2018  
**Time:**  
- 9.00am to 5.00pm (9 July 2018)  
- 2.30pm to 5.30pm (30 July 2018)  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $108.00  
- Non-MOE participants - $803.50

There is a growing recognition that we need a variety of assessment types in schools. These different assessment methods will help bring balance to the emphasis on conventional paper-and-pen tests as well as cater to diverse student abilities and cover a wider range of learning outcomes. Careful consideration is therefore required in evaluating and selecting alternative assessments that can deliver on these intended outcomes. Frameworks for designing alternative assessments and rubrics will be presented in this course. Participants will also be introduced to the salient issues involved in such alternative assessments. At the end of the course, participants will be able to make informed choices based on fundamental assessment principles.

**Trainer:** Dr Tay Hui Yong

### ICT0512 Towards Better Tests & Teaching– Item Analysis in Achievement Tests

**TRAISI Code:** 73212  
**Duration:** 12 hours  
**Dates:** 10 and 12 July 2018  
**Time:** 9.00am to 4.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $129.40  
- Non-MOE participants - $964.00

Item analysis is a set of statistical methods used for evaluating the statistical quality of test items. It is widely used in the testing industry to improve item quality and develop more reliable and valid tests. In this course, we will focus on item analysis in achievement tests (e.g. tests and exams in schools of developed skill or knowledge). This is a hands-on skill development workshop conducted in the computer lab. To maximise the learning experience, participants are encouraged to bring their own data set for analysis.

**Trainer:** Dr Lee Ling

### ICT0325 Assessment Literacy 2.3 - Designing Quality Alternative Assessments and Associated Rubrics

**TRAISI Code:** 73209  
**Duration:** 10 hours  
**Dates:** 9 and 30 July 2018  
**Time:**  
- 9.00am to 5.00pm (9 July 2018)  
- 2.30pm to 5.30pm (30 July 2018)  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $108.00  
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There is a growing recognition that we need a variety of assessment types in schools. These different assessment methods will help bring balance to the emphasis on conventional paper-and-pen tests as well as cater to diverse student abilities and cover a wider range of learning outcomes. Careful consideration is therefore required in evaluating and selecting alternative assessments that can deliver on these intended outcomes. Frameworks for designing alternative assessments and rubrics will be presented in this course. Participants will also be introduced to the salient issues involved in such alternative assessments. At the end of the course, participants will be able to make informed choices based on fundamental assessment principles.

**Trainer:** Dr Tay Hui Yong

### ICT0320 Assessment Literacy 2.4: Effective Questioning & Feedback as AfL Strategies

**TRAISI Code:** 72245  
**Duration:** 10 hours  
**Dates:** 5 and 26 July 2018  
**Time:**  
- 0.00am to 5.00pm (5 July 2018)  
- 2.30pm to 5.30pm (26 July 2018)  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $108.00  
- Non-MOE participants - $803.50

The course is designed to build teachers’ capacity in the areas of questioning and feedback, two important assessment for learning (AfL) strategies. Using research-informed best practices, participants explore and apply questioning and feedback within authentic contexts. While focusing on enhancing teachers’ use of AfL strategies, the course examines how participants may plan the conditions for ideal questioning and feedback practices. Through discussion, hands-on and reflective activities, participants will enhance their knowledge and skills in using Q&F strategies to support and evaluate teaching and learning. AfL practices and understandings will be set within the context of MOE Assessment Philosophy and assessment competencies.

**Trainer:** Dr Rozi Rahmat

### ICT0512 Towards Better Tests & Teaching– Item Analysis in Achievement Tests

**TRAISI Code:** 73212  
**Duration:** 12 hours  
**Dates:** 10 and 12 July 2018  
**Time:** 9.00am to 4.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $129.40  
- Non-MOE participants - $964.00

Item analysis is a set of statistical methods used for evaluating the statistical quality of test items. It is widely used in the testing industry to improve item quality and develop more reliable and valid tests. In this course, we will focus on item analysis in achievement tests (e.g. tests and exams in schools of developed skill or knowledge). This is a hands-on skill development workshop conducted in the computer lab. To maximise the learning experience, participants are encouraged to bring their own data set for analysis.

**Trainer:** Dr Lee Ling
ICT0202 Differentiated Instruction for Diverse Learners  
(TRAISI Code: 70205)

**Duration:**
14 hours

**Dates:**
23 and 24 July 2018

**Time:**
9.00am to 5.00pm

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $150.80
- Non-MOE participants - $1,124.50

This course provides an overview of differentiated instruction (DI), and its basic principles and components. It aims to help participants develop an understanding of different learner needs and interests in the regular classroom. The teachers will explore the principles and practices of differentiated instruction and learn to cater to these needs using DI principles and strategies. As part of the course, participants will also adapt and differentiate activities/materials to meet varied learning needs and interests. Participants will analyse and discuss issues in implementation, as well as solutions to problems inherent in a differentiated classroom. The roles of teachers will be examined and possible challenges will also be discussed.

**Trainer:**
Ms Lucy Fernandez

**Target audience:**
All educators

**Learning dimension:**
4

ICT0328 Evidence-based Assessment for Learning  
(TRAISI Code: 73207)

**Duration:**
10 hours

**Dates:**
31 July and 14 August 2018

**Time:**
- 9.00am to 5.00pm (31 July 2018)
- 2.30pm to 5.30pm (14 August 2018)

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $108.00
- Non-MOE participants - $803.50

Assessment begins with clarity of purpose and gathers evidence to inform future practices. The quality of the evidence is only as good as the assessment design. What shapes quality assessment design? How to use assessment results formatively? These questions which connect assessment design to the intended use of evidence for the action part of learning will be discussed. Principled approaches to interpret and use evidence to advance learning will be introduced. Participants will be able to make evidence-based decisions in knowing where learning is headed, where it is now, and what to do next to progress learning.

**Trainer:**
Dr Rachel Goh

**Target audience:**
All educators

**Learning dimension:**
3

ICT0511 Basic Concepts in Statistics and Statistical Inference  
(TRAISI Code: 73211)

**Duration:**
12 hours

**Dates:**
24 and 26 July 2018

**Time:**
9.00am to 4.00pm

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

An introduction to basic concepts and issues in measurement: correlation and descriptive statistics including organising, summarising, reporting and interpreting data. The course covers elementary probability theory; random variables and probability distributions; sampling distributions; estimation theory and hypothesis testing using binomial, normal, T, chi square, and F distributions. Basic mean comparisons including simple linear regression, one-way ANOVA, & two-way ANOVA. This is a hands-on skill development workshop conducted in the computer lab. To maximise the learning experience, participants are encouraged to bring their own data set for analysis.

**Trainer:**
Dr Lee Ling

**Target audience:**
All educators

**Learning dimension:**
4

ICT0413 Engaging Pedagogies  
(TRAISI Code: 12378)

**Duration:**
10 hours

**Dates:**
2 and 28 August 2018

**Time:**
- 9.00am to 5.00pm (2 August 2018)
- 2.30pm to 5.30pm (28 August 2018)

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $108.00
- Non-MOE participants - $803.50

This course explores the narrow definition of pedagogy, i.e., the art and science of teaching (or lesson delivery method), and what it takes to engage learners. Fundamental to the concept of engaging pedagogies is the question: What are your learning objectives? Participants will understand that engaging pedagogies are only means to an end. Clear goals are necessary in selecting the most appropriate pedagogy to support student engagement during learning.

**Trainer:**
Assistant Professor Heng Tang Tang

**Target audience:**
All educators

**Learning dimension:**
4
ICT0312 Assessment Leadership in Schools - Policy and Practice
(TRAISI Code: 50669)

Duration: 12 hours
Dates: 13 and 27 August 2018
Time: 9.00am to 4.00pm
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

By the end of the course, participants should be able to have conceptual clarity in the distinction and relationship between assessment of and for learning. They will also understand the conditions for, and essential elements of, feedback practice in schools and classrooms; and use rubrics to anticipate, articulate and accentuate academic standards in schools. Lastly, they will learn to appreciate the role and complexities of leadership in guiding and enhancing formative assessment practices in schools.

Trainer: Associate Professor Kelvin Tan

Target audience: Secondary school and Junior College teachers

Learning dimension:

ICT0509 Leading Professional Learning Teams in Data-Driven Conversations
(TRAISI Code: 71182)

Duration: 8 hours
Dates: 1st run - 20 August 2018
• 2nd run - 27 August 2018
• 3rd run - 17 September 2018
• 4th run - 20 September 2018
• 5th run - 1 October 2018
• 6th run - 8 October 2018
Time: 8.30am to 5.30pm
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $643.00

This is a hands-on skills development course, conducted in the computer lab at NIE. The objective of this course is to gain practical experiences in applied statistics for educational research. The aim of the course is to provide participants with the skills to confidently conduct a basic repertoire of statistical data analyses and interpret the results in light of their inquiry project.

Trainer: Dr Yang Chien Hui

Target audience: All educators

Learning dimension:

ICT0513 Designing Qualitative Research

Duration: 12 hours
Dates: 1 and 2 November 2018
Time: 9.00am to 4.00pm
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

This course is on developing strong, usable research designs for small-scale studies. It debunks the myth that qualitative researchers must muddle through analyses. Instead, having a clear design in place at the start gives you the room you need for the critical back and forth between data collection and analysis. We will examine how to identify topics, write research questions, articulate professional stances, and select methods of sampling, data collection and analysis. A basic premise here is that designing research calls for creativity and an openness to true discovery. By the end of the course, you should have a stronger grasp of your options for constructing good qualitative designs.

Trainer: Dr Mary George Sudha

Target audience: All educators

Learning dimensions:
ICT0514 Analyses of Qualitative Research Data

This course focuses on a component of research that many find daunting – the analysis of rich, complex qualitative data. Basic ways of processing qualitative data will be presented. Through hands-on activities, participants will go through the motions of planning analysis, processing mock data, and reporting findings. Special features include how to keep rigour and ethics at the core of research decisions. Participants will also be given a glimpse of common data-analysis dilemmas faced by even seasoned researchers. At the end of the course, participants should be able to make more informed decisions about qualitative analyses.

Trainer:
Dr Mary George Sudha

Target audience:
All educators

Learning dimensions:
1 3

INS2144 Refresher on Machining Skills III (Teak - Brass)
(TRAISI Code: 80304)

This Refresher on Machining Skills III in-service course is one of the four ‘Refresher on Machining Skills’ in-service courses for all D&T teachers and EWIs. As a whole, the main overarching aim of the four courses is to refresh, familiarise and internalise practical knowledge and skills. One would have clocked the essential number of hours of confidence practicing on the machines after completing all the four courses to be competent at entry level. For D&T teachers and EWIs who are new to wood lathe, the basics of handling the machine will be taught. Ancillary but important practical skill exercises on brazing and welding, will be carried out.

You will be assessed for the course.

Trainers:
Mr Jason Tan and Mr Ng Yong Sim

Target audience:
Secondary level Design and Technology teachers and education workshop instructors

Learning dimension:
3

INS2145 Refresher on Machining Skills IV (Jelutong - Copper)
(TRAISI Code: 80305)

This Refresher on Machining Skills IV in-service course is one of the four ‘Refresher on Machining Skills’ in-service courses for all D&T teachers and EWIs. As a whole, the main overarching aim of the four courses is to refresh, familiarise and internalise practical knowledge and skills. One would have clocked the essential number of hours of confidence practicing on the machines after completing all the four courses to be competent at entry level. For D&T teachers and EWIs who are new to wood lathe, the basics of handling the machine will be taught. Ancillary but important practical skill exercises on brazing and welding, will be carried out.

You will be assessed for the course.

Trainers:
Mr Jason Tan and Mr Ng Yong Sim

Target audience:
Secondary level Design and Technology teachers and education workshop instructors

Learning dimension:
3

Looking to refresh and upgrade yourself professionally? Search for professional development courses offered by NIE here.

www.nie.edu.sg/course-finder
### INS2115 Teacher-Pupil Coach Designer

**TRAISI Code:** 80328  
**Duration:** 80 hours  
**Dates:** 1 to 12 October 2018  
**Time:** 8.30am to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $1,285.00  
- Non-MOE participants - $6,049.00

This course aims to equip Design & Technology (D&T) teachers with an in-depth understanding of facilitating D&T pupils’ design work. The course activities are designed with anchor on the philosophical underpinning of D&T education as general education for 13 to 16 year olds. The course will simulate and engage course participants in the role of a ‘classroom pupil’ and the course instructor as a ‘classroom teacher’. Participants will be immersed in the act of co-designing with the course instructors. At the end of the course, participants will acquire the know-how of a teacher-pupil coach-designer in-action.

You will be assessed for the course.

**Trainers:**  
Mr Jason Tan and Mr Ng Yong Sim

**Target audience:**  
Secondary level Design and Technology teachers and education workshop instructors  
**Learning dimensions:**

### INS2141 Design-and-Make III (Scamper!)

**TRAISI Code:** 80180  
**Duration:** 24 hours  
**Dates:**  
- 1st run - 29 to 31 October 2018  
- 2nd run - 5, 7 and 8 November 2018  
- 3rd run - 12 to 14 November 2018  
**Time:** 8.30am to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $386.20  
- Non-MOE participants - $2,055.40

This in-service course is one of the three Design-and-Make in-service courses to support the teaching and learning of Design & Technology (D&T) at the lower secondary level. The three courses are standalone and they cover three fundamental design techniques necessary for the implementation of the lower secondary programme, namely, Design-and-Make I (Randomness!); Design-and-Make II (Shape Borrowing!); and Design-and-Make III (SCAMPER!). The main objective of the three courses is to ground D&T teachers in the practice by going through exercises and practices first as a teacher-designer and second as a D&T pedagogue.

You will be assessed for the course.

**Trainers:**  
Mr Jason Tan and Mr Ng Yong Sim

**Target audience:**  
Secondary level Design and Technology teachers and education workshop instructors  
**Learning dimensions:**
### IEC0014 Engaging Parents: A Practical Approach (for Beginning Teachers)

**Duration:** 12 hours  
**Dates:**  
- 1st run - 2 and 3 July 2018  
- 2nd run - 5 and 6 July 2018  
**Time:** 9.00am to 4.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $129.40  
  - Non-MOE participants - $964.00

Positive interactions and positive relationships with parents and other community members can improve student performance, increase parent and volunteer involvement in schools, decrease student truancy, and increase student health (Chrispeels, 2006; McMahon, Browning, Rose-Colly, 2001; MOE, 2012; Bosma, et. al, 2010). This course focuses on the strategies, resources, and tools that will help educators build healthy relationships with parents and other community members.

**Trainer:** To be confirmed  
**Target audience:** All educators  
**Learning dimension:**

### IEC4004 Autism Spectrum Disorders: Characteristics and Classroom Intervention (TRAISI Code: 73260/73261)

**Duration:** 36 hours  
**Dates:** 24 to 26 July 2018  
**Time:** 8.30am to 5.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $386.20  
  - Non-MOE participants - $2,890.00

This course provides an overview of Autism Spectrum Disorders (ASD), with a primary focus on students with high-functioning autism and Asperger’s syndrome. The definitions and characteristics of learners with ASD will be examined in the context of planning intervention programmes. The participants will also learn strategies for supporting these learners in local mainstream schools.

**Trainer:** Mr Norman Kee  
**Target audience:** All educators  
**Learning dimension:**

### IEC4020 Attention Deficit Hyperactivity Disorder: Characteristics and Classroom Intervention (TRAISI Code: 73254/73257)

**Duration:** 36 hours  
**Dates:** 30, 31 July and 27 August 2018  
**Time:** 8.30am to 5.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $386.20  
  - Non-MOE participants - $2,890.00

This course provides an overview of how to support children and youth with Attention Deficit/Hyperactivity Disorder (ADHD) in the classroom. The definitions, characteristics and challenges of learners with ADHD will be examined through the use of case studies and the opportunity to apply theory to practice. This is in light of the need to derive practical and pragmatic strategies to address challenges faced by both the student and teacher in local mainstream schools in a holistic and systematic fashion; while employing frameworks introduced in the earlier course(s) such as the ecological framework and the APIE within one’s school context.

**Trainer:** Assistant Professor Zachary Walker  
**Target audience:** All educators  
**Learning dimension:**

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**EARLY CHILDHOOD AND SPECIAL NEEDS**
## IEC4014 Emotional/ Behavioural Disorders: Characteristics and Classroom Intervention

*TRAISI Code: 73263/73264*

**Duration:** 36 hours  
**Dates:** 9, 10 and 11 July 2018  
**Time:** 8.30am to 5.00pm  
**Course fee:**  
- Includes 7% GST and $1 copyright fee  
- MOE participants - $386.20  
- Non-MOE participants - $2,890.00  
**The issues that surround the identification and management of behaviours of students who disrupt classroom learning and teaching cause considerable consternation to teachers, administrators, other students and families. This module focuses not only on management of classroom behaviours, but also on an understanding of behaviour in the context of school, home and community issues. It also examines the range of behaviour difficulties from withdrawn depressed and suicidal behaviours at one extreme to conduct and oppositional defiance disorders at the other.**  
**You will be assessed for the course.**  
**Trainer:** Dr Carol Tan  
**Target audience:** All educators  
**Learning dimension:**  

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## IEC4003 Learning Disabilities: Characteristics and Classroom Intervention

*TRAISI Code: 73258/73259*

**Duration:** 36 hours  
**Dates:** 19, 20 July and 13 August 2018  
**Time:** 8.30am to 5.00pm  
**Course fee:**  
- Includes 7% GST and $1 copyright fee  
- MOE participants - $386.20  
- Non-MOE participants - $2,890.00  
**This course provides an overview of the characteristics and prevalence of learning disabilities, as well as the challenges faced by students with learning disabilities. Educational approaches, including learning strategies and social skills development for these students will be examined.**  
**You will be assessed for the course.**  
**Trainer:** Mr Norman Kee  
**Target audience:** All educators  
**Learning dimension:**  

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## IEC4019 Engaging Students with Special Needs in Mainstream Classrooms

*TRAISI Code: 73252/73253*

**Duration:** 13 hours  
**Dates:** 19 and 20 November 2018  
**Time:** 8.30am to 5.00pm  
**Course fee:**  
- Includes 7% GST and $1 copyright fee  
- MOE participants - $140.10  
- Non-MOE participants - $1,044.25  
**This course seeks to equip teachers with an introduction to the context of special needs education in Singapore as well as an understanding of the attitudes and perceptions of stakeholders in this process. Participants will be introduced to a framework for supporting pupils with special needs in their classrooms; drawing on strengths within the classroom context and incorporating other resources within the school and community. In addition, course participants will also be introduced to the ecological framework and a systematic approach for intervention involving assessment, planning, implementation and evaluation (APIE). This course will provide a foundation for building supportive partnerships with families of pupils with special needs.**  
**Trainer:** Ms Sarinajit Kaur  
**Target audience:** All educators  
**Learning dimension:**  

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## ENGLISH LANGUAGE AND LITERATURE

### IEL1052 Reading & Vocabulary (Primary)

**Duration:** 16 hours  
**Dates:**  
- 1st run - 9 and 16 July 2018  
- 2nd run - 10 and 17 July 2018  
**Time:**  
- 8.30am to 5.30pm  
**Course fee:**  
- Includes 7% GST and $1 copyright fee  
- MOE participants - $172.20  
- Non-MOE participants - $1,285.00  
**This course is intended to introduce crucial professional and subject content knowledge about the teaching of reading and vocabulary in the primary grades. It is intended for lead teachers in the Singapore schools, especially those who do not have training in English Language.**  
**You will be assessed for the course.**  
**Trainer:** Associate Professor Rita Silver  
**Target audience:** English Lead Primary school teachers  
**Learning dimension:**  

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**IEL2085 Reading & Vocabulary (Secondary)**

**Duration:** 24 hours  
**Dates:** 17, 24 and 31 July 2018  
**Time:** 8.30am to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $257.80  
- Non-MOE participants - $1,927.00

This course aims to equip lead teachers in the Singapore schools with subject content knowledge (SCK) and pedagogical content knowledge (PCK) about the teaching of reading and vocabulary in the secondary school.

You will be assessed for the course.

**Trainer:** Dr Willy A Renandya  
**Target audience:** English Lead Secondary school teachers  
**Learning dimensions:**  
- 2  
- 3

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**IEL1053 Teaching Writing (Primary)**

**Duration:** 16 hours  
**Dates:**  
- 1st run - 19 and 24 July 2018  
- 2nd run - 23 and 26 July 2018  
**Time:** 8.30am to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $172.20  
- Non-MOE participants - $1,285.00

This course is intended to introduce crucial, professional and subject content knowledge about the teaching of reading and vocabulary in the primary grades. It is intended for lead teachers in the Singapore schools, especially those who do not have training in English Language.

You will be assessed for the course.

**Trainer:** Associate Professor Rita Silver  
**Target audience:** English Lead Primary school teachers  
**Learning dimensions:**  
- 2  
- 3  
- 4

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**IEL2070 Interpreting Drama Texts through Performance**

**Duration:** 5 hours  
**Date:** 26 July 2018  
**Time:** 9.00am to 2.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $54.50  
- Non-MOE participants - $402.25

Students need to understand that a play is theatrical and laden with subtext. Hence, they need strategies to explore these hidden meanings in order to develop a more comprehensive understanding of it. In this workshop, the instructor will explore how drama can be used as a medium, not simply for realising performance, but effective deconstruction of a dramatic work. Teachers will learn about facilitating ensemble performances using examples from Shakespearean works including The Merchant of Venice – a text recommended for Lower Secondary Literature.

**Trainer:** Mr Ken Mizusawa  
**Target audience:** Secondary school Literature teachers  
**Learning dimensions:**  
- 2  
- 3  
- 4

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**IEL2071 Understanding Drama as Text and Performance**

**Duration:** 5 hours  
**Date:** 27 July 2018  
**Time:** 9.00am to 2.00pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $54.50  
- Non-MOE participants - $402.25

In the study of drama, it is not sufficient to understand a text's potential as a literary text – we must also understand it as a performance to be experienced in a physical theatrical space. Hence, teachers need to be equipped with the skills and strategies to examine a text for its performative qualities. This workshop will examine how the medium of drama may be effectively employed in the Literature classroom to make students conscious of drama as artistic work to be enjoyed as a reader, performer and audience. Teachers will be introduced to key ideas, dramatic conventions and activities that will allow them to workshop a range of plays.

**Trainer:** Mr Ken Mizusawa  
**Target audience:** Secondary school Literature teachers  
**Learning dimensions:**  
- 2  
- 3  
- 4
IEL2086 Teaching Writing (Secondary)

This course aims to strengthen practising teachers’ knowledge and understanding of the theory and practice of teaching writing at the secondary level. It will provide an overview of the current approaches to teach and assess writing and equip participants with strategies and techniques that cater to the needs of different types of students.

You will be assessed for the course.

Trainer:
Associate Professor Peter Teo

Target audience:
Secondary school teachers

Learning dimension:

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $172.20
• Non-MOE participants - $1,285.00

IPD1005 Holistic Assessment-Performance Tasks: For Primary 1 and Primary 2 Teachers (English)
(TRAISI Code: 12302)

The course will expose lower primary teachers to a wide variety of assessment methods and strategies to gather information on students’ learning. It will equip lower primary teachers with the necessary skills to design age-appropriate performance tasks and provide feedback to build students’ confidence and motivation in the learning of English Language and Mathematics. The skills expected of the students for these tasks are aligned to the learning outcomes in MOE’s English Language and Mathematics. Participants will gain deeper understanding on the effective implementation of these performance tasks with designed rubrics and specific assessment criteria to assess students’ learning.

Trainer:
Mr Morgan Zhou

Target audience:
Primary school teachers

Learning dimension:

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $33.10
• Non-MOE participants - $241.75
IMET035 Algebra in Secondary Elementary Mathematics  
(TRAISI Code: 30762)

Duration: 12 hours  
Dates: 9, 16, 23 and 30 July 2018  
Time: 2.30pm to 5.30pm  
Course fee: (includes 7% GST and $1 copyright fee)  
• MOE participants - $129.40  
• Non-MOE participants - $964.00  

This course will focus on (i) topics such as indices, graphs, solving quadratic/fractional equations, solving linear inequalities, and matrices; and (ii) the solving of Elementary Mathematics questions involving HOTS (Higher Order Thinking Skills).

You will be assessed for the course.

Trainer:  
Assistant Professor Chua Boon Liang  

Target audience:  
Secondary school teachers  

Learning dimension:  
3

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IMET046 Geometry: Developing Spatial Visualisation  
(Upper Primary)

Duration: 12 hours  
Dates: 10, 17, 24 and 31 July 2018  
Time: 2.30pm to 5.30pm  
Course fee: (includes 7% GST and $1 copyright fee)  
• MOE participants - $129.40  
• Non-MOE participants - $964.00  

The course will present different approaches to some geometry topics and provide sample hands-on activities with manipulatives organised into four sections: 2-D geometry concepts including symmetry and angles; 3-D geometry concepts including nets and drawing; relationships among properties of shapes including angle sums; and enrichment including problem solving in spatial visualisation. The van Hiele model on geometry learning will be explored to develop pupils' insight and higher levels of thinking.

Trainer:  
Dr Joseph Yeo Kai Kow  

Target audience:  
Primary 3 to 6 Mathematics teachers  

Learning dimensions:  
3 4

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IMET095 Teaching A-Level Mathematics Using Real-World Contexts

Duration: 12 hours  
Dates: 13, 20, 27 July and 3 August 2018  
Time: 2.30pm to 5.30pm  
Course fee: (includes 7% GST and $1 copyright fee)  
• MOE participants - $129.40  
• Non-MOE participants - $964.00  

The real-world data and modes of operations are often complex and inexact. Thus, the 21st Century students must have the relevant mathematical skills to handle such complexity and inexactness, which intrinsically are unlike what students usually encounter in ideal theoretical settings. The A-Level Mathematics syllabus recognises this emergent need to handle real-life contexts and emphasises on the need to apply mathematics to tackle problems in such contexts. Such an emphasis must be realised in the processes of teaching and learning, and eventually must be manifested in all modes of assessment.

Trainer:  
Assistant Professor Ho Weng Kin  

Target audience:  
Junior College teachers  

Learning dimension:  
3

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IMET041 Teaching of Calculus in Secondary Additional Mathematics  
(TRAISI Code: 30764)

Duration: 12 hours  
Dates: 13, 20, 27 July and 3 August 2018  
Time: 2.30pm to 5.30pm  
Course fee: (includes 7% GST and $1 copyright fee)  
• MOE participants - $129.40  
• Non-MOE participants - $964.00  

This course discusses the pedagogy and the underlying principles based on sound content knowledge of secondary school calculus.

Trainer:  
Associate Professor Toh Tin Lam  

Target audience:  
Secondary school teachers  

Learning dimension:  
3
### IME4404 School-based Curriculum Development in Mathematics

**TRAISI Code:** 31309

- **Duration:** 24 hours
- **Dates:** 13 August to 8 October 2018 (Mondays)
- **Time:** 8.30am to 11.30am
- **Course fee:** (includes 7% GST and $1 copyright fee)
  - MOE participants - $257.80
  - Non-MOE participants - $1,927.00

This course introduces the participants to both the components and the processes of curriculum development in mathematics. Participants will apply the knowledge to school-based mathematics curriculum development, and discussed it in relation to the Singapore mathematics curriculum.

You will be assessed for the course.

**Trainer:** Associate Professor Lee Ngan Hoe

**Target audience:** Primary school teachers

**Learning dimensions:**

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3 4 6
```

### IME4418 School-based Assessment Practices in Mathematics

**TRAISI Code:** 31310

- **Duration:** 24 hours
- **Dates:** 13 August to 8 October 2018 (Mondays)
- **Time:** 8.30am to 11.30am
- **Course fee:** (includes 7% GST and $1 copyright fee)
  - MOE participants - $257.80
  - Non-MOE participants - $1,927.00

This course advances teachers’ assessment literacy beyond knowledge-comprehension-practice phase of initial teacher preparation into the application-analysis phase. Within a broader framework of curriculum-instruction-assessment, it builds upon teachers’ existing knowledge of assessment strategies in primary mathematics to plan school-based, level-wide assessment programmes for teaching and learning purposes.

You will be assessed for the course.

**Trainer:** Dr Dawn Ng

**Target audience:** Primary school teachers

**Learning dimensions:**

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3 4 5
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### IME4409 Mathematical Processes in Numbers

**TRAISI Code:** 31311

- **Duration:** 24 hours
- **Dates:** 14 August to 9 October 2018 (Tuesdays)
- **Time:** 2.30pm to 5.30pm
- **Course fee:** (includes 7% GST and $1 copyright fee)
  - MOE participants - $257.80
  - Non-MOE participants - $1,927.00

This course will focus on the different ways to foster mathematical processes in the primary mathematics classrooms, according to the Singapore mathematics curriculum framework. Topics will include: Whole Numbers, Fractions, Decimals and Percent. The use of mathematical tasks to develop mathematical thinking and reasoning will also be discussed.

You will be assessed for the course.

**Trainer:** Dr Cheng Lu Pien

**Target audience:** Primary school teachers

**Learning dimensions:**

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3 4 5
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### IME4410 Mathematical Processes in Data Handling

**TRAISI Code:** 31312

- **Duration:** 24 hours
- **Dates:** 14 August to 9 October 2018 (Tuesdays)
- **Time:** 8.30am to 11.30am
- **Course fee:** (includes 7% GST and $1 copyright fee)
  - MOE participants - $257.80
  - Non-MOE participants - $1,927.00

This course deepens teachers’ mathematics pedagogical content knowledge in the teaching and learning of data handling. Various forms of data collection, organisation, representation and interpretation will be discussed. The course will focus on how children make sense of data, how to help them draw connections between school mathematics and the real-world.

You will be assessed for the course.

**Trainer:** Dr Joseph Yeo Boon Wooi

**Target audience:** Primary school teachers

**Learning dimensions:**

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3 4 5
```
IME4411 Mathematical Processes in Algebra  
**TRAISI Code: 31313**

**Duration:** 24 hours  
**Dates:** 15 August to 10 October 2018 (Wednesdays)  
**Time:** 2.30pm to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $257.80  
- Non-MOE participants - $1,927.00  

This course will explore different ways to foster mathematical processes according to the Singapore mathematics curriculum framework 3 in the teaching of basic algebraic reasoning and the introduction of formal algebra.

You will be assessed for the course.

**Trainer:** Associate Professor Ng Swee Fong  
**Target audience:** Primary school teachers  
**Learning dimensions:**

IME4412 Mathematical Processes in Geometry  
**TRAISI Code: 31314**

**Duration:** 24 hours  
**Dates:** 15 August to 10 October 2018 (Wednesdays)  
**Time:** 8.30am to 11.30am  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $257.80  
- Non-MOE participants - $1,927.00  

The course aims to increase teachers’ pedagogical content knowledge for the teaching of Geometry. Different ways to foster mathematical processes according to the Singapore mathematics curriculum framework 4, the diagnosis of learning difficulties and misconceptions and how to help students enhance their spatial visualisation will be covered. Course topics include various teaching strategies and approaches, including the use of technology, word problems, pupils’ thinking, their errors and misconceptions and remedial instructions.

You will be assessed for the course.

**Trainer:** Dr Joseph Yeo Kai Kow  
**Target audience:** Primary school teachers  
**Learning dimensions:**

IME4413 Mathematical Processes in Measurement  
**TRAISI Code: 31315**

**Duration:** 24 hours  
**Dates:** 16 August to 11 October 2018 (Thursdays)  
**Time:** 8.30am to 11.30am  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $257.80  
- Non-MOE participants - $1,927.00  

The course aims to increase teachers’ pedagogical content knowledge for the teaching of Measurement. Different ways to foster mathematical processes according to the Singapore mathematics curriculum framework 5, the diagnosis of learning difficulties and misconceptions and how to help students make sense of measurement will be covered. Course topics include fundamental ideas in measurement, various teaching strategies and approaches incorporating the use of technology, word problems, pupils’ thinking, their errors and misconceptions and remedial instructions.

You will be assessed for the course.

**Trainer:** Dr Eric Chan  
**Target audience:** Primary school teachers  
**Learning dimensions:**

IME4414 Mathematical Processes in Ratio, Rate and Speed  
**TRAISI Code: 31316**

**Duration:** 24 hours  
**Dates:** 16 August to 11 October 2018 (Thursdays)  
**Time:** 2.30pm to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $257.80  
- Non-MOE participants - $1,927.00  

This course focuses mathematical processes according to the Singapore mathematics curriculum framework 6 in the teaching and learning of ratio, rate and speed. It deepens teachers’ mathematics pedagogical content knowledge in the topics.

You will be assessed for the course.

**Trainer:** Dr Ng Wee Leng  
**Target audience:** Primary school teachers  
**Learning dimensions:**
IME4416 Topics in Numbers  
*(TRAISI Code: 31307)*

**Duration:**  
24 hours

**Dates:**  
17 August to 12 October 2018 (Fridays)

**Time:**  
2.30pm to 5.30pm

**Course fee:**  
(includes 7% GST and $1 copyright fee)  
• MOE participants - $257.80  
• Non-MOE participants - $1,927.00

This course provides the foundational understanding of the arithmetic topics which form a major portion of the primary mathematics curriculum. Problem-solving processes will be introduced and re-visited in the different topics, which include historical evolution of number concepts, development of place value systems; classification of extended number systems, and elementary number theory.

You will be assessed for the course.

**Trainer:**  
Dr Teo Kok Ming

**Target audience:**  
Primary school teachers

**Learning dimension:**  
3

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IME4417 Topics in Geometry and Measurement  
*(TRAISI Code: 31308)*

**Duration:**  
24 hours

**Dates:**  
17 August to 12 October 2018 (Fridays)

**Time:**  
8.30am to 11.30am

**Course fee:**  
(includes 7% GST and $1 copyright fee)  
• MOE participants - $257.80  
• Non-MOE participants - $1,927.00

This course aims to equip the primary mathematics teacher with a deeper understanding of geometry and measurement topics in the primary mathematics curriculum. Topics include the historical evolution of the concept of measurement in two and three dimensions; the foundational concepts of congruence and similarity; modern approaches to geometry based on symmetry and transformations and their implications for classroom teaching.

You will be assessed for the course.

**Trainer:**  
Dr Yap Sook Fwe

**Target audience:**  
Primary school teachers

**Learning dimension:**  
3

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IPD1005 Holistic Assessment-Performance Tasks:  
For Primary 1 and 2 Teachers (Mathematics)  
*(TRAISI Code: 31322)*

**Duration:**  
3 hours

**Dates:**  
• 1st run - 13 September 2018  
• 2nd run - 20 September 2018

**Time:**  
2.30pm to 5.30pm

**Course fee:**  
(includes 7% GST and $1 copyright fee)  
• MOE participants - $33.10  
• Non-MOE participants - $241.75

This course discusses different performance tasks for Primary 1 and 2 pupils and the evaluation of mathematical thinking and reasoning from these tasks. Participants will work on some tasks and engage in discussion about task design.

**Trainer:**  
Dr Joseph Yeo Kai Kow

**Target audience:**  
Primary school teachers

**Learning dimension:**  
4

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IPE0026 Coaching Children in Sports

**Duration:**  
16 hours

**Dates:**  
21 and 22 November 2018

**Time:**  
8.30am to 5.30pm

**Course fee:**  
(includes 7% GST and $1 copyright fee)  
• MOE participants - $172.20  
• Non-MOE participants - $1,285.00

This course is designed to equip coaches and teachers with the necessary skills and knowledge in dealing with children who are involved in recreation and developmental sports. This module provides an introduction to theory of coaching and learning in the school sports setting. It covers various aspects relating to effective coaching of children for training and competition. The course will have a mix of practical and theory aspects to equip coaches and teachers the necessary skills for developing basic knowledge and skills for coaching children involved in sports.

You will be assessed for the course.

**Trainer:**  
Associate Professor Koh Koon Teck

**Target audience:**  
Secondary school and Junior college teachers

**Learning dimension:**  
4
### IPS0008 Empowering Student Social and Emotional Competencies and Lifeskills

**Duration:** 16 hours  
**Dates:** 17 and 18 July 2018  
**Time:** 8.30am to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $172.20  
- Non-MOE participants - $1,285.00

Participants will have an opportunity to acquaint themselves with the values, knowledge and skills, to deliver instruction and programmes promoting the personal and social development of students. A foundation will be laid for participants to acquire knowledge and skills to design and deliver activities to SEL outcomes in students. Emphasis will be placed upon the ways in which a range of aspects of school life can help develop and promote SECs in students. An avenue is provided to explore approaches to nurturing students’ sense of emotional security and safety, attitudes and values about self, others, work, and community within a collaborative framework. This module has a strong practice focus and considers a range of strategies designed to promote students’ personal and social functioning linking them to theoretical approaches. It provides for opportunities to examine how schools can enhance students’ abilities to recognise and manage their emotions, appreciate the perspectives of others, establish pro-social goals and solve problems, and use a variety of interpersonal skills to handle the challenges of growing and adapting to changes in their lives, and for effective academic and life functioning.

You will be assessed for the course.

**Trainer:**  
Associate Professor Isabella Wong

**Target audience:**  
All educators

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### IPS0003 Thriving Teachers, Thriving Students: Social-Emotional Components  
*(TRAISI Code: 72711)*

**Duration:** 16 hours  
**Dates:** 24 and 25 July 2018  
**Time:** 8.30am to 5.30pm  
**Course fee:** (includes 7% GST and $1 copyright fee)  
- MOE participants - $172.20  
- Non-MOE participants - $1,285.00

This workshop explores how supporting teachers flourish and thrive and how enhancing educators’ social and emotional competency (SEC) can help increase their engagement in teaching, strengthen their relationships with students, and improve their stress management, all of which lead to improved student outcomes. Through interactive exercises, participants examine the connection between the 5 SEL competencies of self-awareness; self-management; social awareness; social management; responsible decision-making and effective teaching; learn to identify early signs of stress; reconnect to their identity as a teacher and develop a self-care plan for managing stress. Participants review the latest research related to adult SEC and flourishing, and how it can support their effectiveness as educators. This workshop is highly active, brain-based, and experiential.

You will be assessed for the course.

**Trainer:**  
Associate Professor Isabella Wong

**Target audience:**  
All educators

**Learning dimensions:**

1.  
2.
INS1015 An Integrated Thematic Approach to Teaching Primary Science

Duration: 12 hours

Dates: 10 and 11 July 2018

Time: 9:00am to 4:00pm

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $954.00

This course seeks to equip primary science teachers with pedagogical and content knowledge for teaching the five themes (Diversity, Cycles, Energy, Systems and Interaction) in the Primary Science (2014) Syllabus. The course is spread over two full days where relevant content knowledge will be reviewed in the context of inquiry science instruction and assessment. The overarching focus will be on the integrated nature of the themes, on gaining scientific literacy, and on the relevance of science to the everyday life of the child.

Trainers: Mr Timothy Tan and Mr Wong Wai Lit

Target audience: Primary school teachers

Learning dimensions:

INS4404 Cycles in Primary Science

Duration: 24 hours

Dates: 25 July to 26 September 2018 (Wednesdays)

Time: 2.00pm to 5.00pm

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $386.20
- Non-MOE participants - $2,055.40

The course is designed to equip teachers with the skills to promote pupils' understanding of key scientific concepts in ‘Cycles’, one of the five themes of the Primary Science (2014) syllabus. It aims to integrate the essential content knowledge of cycles with the pedagogical skills of making the knowledge relevant and easy to understand for the primary school students.

You will be assessed for the course.

Trainer: To be advised

Target audience: Primary school teachers

Learning dimensions:

INS4402 Topics in Physical Science for Primary Science Teaching

Duration: 39 hours

Dates: 31 July to 23 October 2018 (Tuesdays)

Time: 2.00pm to 5.00pm

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $626.95
- Non-MOE participants - $3,339.40

This course deals with the theoretical and practical aspects of Physical Science topics from the Primary Science (2008) curriculum. The topics include matter and materials, forms of energy and conversions, heat, light and the solar system, magnetism and electricity and forces.

You will be assessed for the course.

Trainer: To be advised

Target audience: Primary school teachers

Learning dimensions:

INS4401 Topics in Biological Science for Primary Science Teaching

Duration: 39 hours

Dates: 5 August to 28 October 2018 (Mondays)

Time: 2.00pm to 5.00pm

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $626.95
- Non-MOE participants - $3,339.40

This course deals with the content knowledge of the topics in Biological Sciences from the Primary Science (2014) curriculum. The topics are grouped under five themes: Diversity, Cycles, Systems, Energy and Interactions.

You will be assessed for the course.

Trainer: To be advised

Target audience: Primary school teachers

Learning dimensions:
INS2163 Critical Thinking in Biology

This course aims to equip biology teachers with skills to craft activities that will help to raise critical thinking skills among their students. Being able to think critically is the first step to raising meaningful scientifically oriented questions. Raising meaningful questions is fundamental to students' engagement in scientific inquiry.

**Trainer:**
Associate Professor Tan Aik Ling

**Target audience:**
Secondary school Biology teachers

**Learning dimension:**

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INS2097 Inquiry Chemistry for Secondary School

(TRAISI Code: 40726)

Inquiry will be introduced both as a learning concept and as a pedagogical approach to delivering the chemistry curriculum at school level. Besides learning about the various models of scientific inquiry, participants will also explore several inquiry-based pedagogical approaches suitable for engaging students in learning chemistry concepts, investigating authentic chemistry-related problems and assessing students’ understanding and applications of chemistry knowledge and skills. Individual reflection exercises, group-based discussions, sharing and practices, including short lab tasks, will be the main activities and learning strategies used in this in-service course.

**Trainer:**
Dr Tan Kok Siang

**Target audience:**
Secondary school teachers

**Learning dimensions:**

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INS2138 Teaching the Revised H1 Chemistry Extension Topics - Nanomaterials and Polymers

The advancement in material science is important in the development of civilisation. In this course, two of the important materials that we encounter in modern daily life, i.e. nanomaterials and polymers will be discussed. This course will help participants to: (i) understand the relationship between the properties of a material and its microstructure, (ii) be more well-informed about material selection for a given use based on considerations of cost, performance and safety. This course will also help participants to appreciate the relevance and value of academic curriculum related to material science.

**Trainer:**
Assistant Professor Roshan Deen

**Target audience:**
Junior College Science teachers

**Learning dimension:**

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INS2042 Teaching and Learning of H3 Physics

(TRAISI Code: 41207)

In line with the new H3 syllabus, the course aims to equip practising teacher with a basic understanding of the new topics in the H3 syllabus and explore possible pedagogical tools and experiments needed to enhance the understanding of the new content areas.

**Trainer:**
Associate Professor Kwek Leong Chuan

**Target audience:**
Junior College teachers

**Learning dimensions:**

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INS2104 Pollution Experiments Using Ecotoxicology Biomarkers for Schools

Duration: 24 hours
Dates: 14 to 16 November 2018
Time: 9.00am to 6.00pm
Course fee: (includes 7% GST and $1 copyright fee)
  • MOE participants - $386.20
  • Non-MOE participants - $2,055.40

This course combines project-based learning that integrates biology and chemistry in experimental field studies on ecotoxicology, and collaboration with a Singapore government agency (NParks) in a citizen science programme. Participants (teachers with their pupils) will experience the rigour of content-based research through authentic experimental protocols used in field bio-monitoring associated with environmental health indicators.

You will be assessed for the course.

Trainers:
Dr Beverly Goh and Dr Tan Lik Tong

Target audience:
Secondary school and Junior College teachers

Learning dimensions:

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INS2158 Popular Biotechnology - Molecular Diagnosis

Duration: 3 hours
Dates: 26 to 30 November 2018
Time: Online
Course fee: (includes 7% GST and $1 copyright fee)
  • MOE participants - $33.10
  • Non-MOE participants - $241.75

One of the applications of key technology derived from life science research is biotechnology. The influence of biotechnology is evident by its increasing vital roles in the improvement of the quality of our life in food production, environmental protection, health care, pharmaceuticals and medicine. Molecular Diagnosis is amongst one of the popular applications of biotechnology. In this current climate of environmental changes and emerging diseases, it is imperative for biology teachers to be familiar with the latest advancements so that their professional practices can stay abreast of science trends.

Trainer:
Assistant Professor Chen Zhong

Target audience:
Secondary school and Junior College teachers

Learning dimensions:

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INS2155 Teaching the Revised H3 Chemistry

(TRAISI Code: 41201)

Duration: 10 hours
Dates: 30 November 2018 and 30 January 2019
Time:
  • 9.00am to 5.00pm (30 November 2018)
  • 9.00am to 12.00pm (30 January 2019)
Course fee: (includes 7% GST and $1 copyright fee)
  • MOE participants - $161.50
  • Non-MOE participants - $857.00

This course is designed to equip participants with the required knowledge for teaching the new content in the revised H3 Chemistry syllabus. Teaching approaches and learning experiences for these topics will be dealt with during the discussion of the content knowledge. Participants will be encouraged to comment on the suggested teaching approaches and learning experiences from their schools’ perspectives. They will also design and present sample teaching materials and lesson plans for the above topics.

Trainers:
Associate Professor Yan Yaw Kai and Assistant Professor Teo Tang Wee

Target audience:
Junior College teachers

Learning dimension:

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AREAS OF LEARNING FOR CUSTOMISED WORKSHOPS

If you are interested in any of these workshops, please contact us for an option to customise these for your school/cluster. Our contact information is found on the back page of this course catalogue.

★ DEVELOPING PROFESSIONAL LEARNING COMMUNITIES THROUGH LESSON STUDY

ICT0100 Introduction to Lesson Study

Duration:
7 hours

Trainer:
Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $75.90
• Non-MOE participants - $562.75

This course will introduce lesson study as an ongoing, teacher-led, professional learning process that will develop teachers’ capacities and dispositions as they discuss curriculum and subject matter, pedagogy, assessment, student learning, and other related issues. Participants will explore the various stages of the lesson study cycle from the unit and lesson planning (PLAN), research lesson implementation (DO), observation (SEE), post-research lesson discussion and refinements made to the research lesson (IMPROVE) vicariously through the use of video cases. The benefits and challenges of implementing lesson study will also be explored.

Target audience:
All educators

ICT0102 Experiencing Lesson Study

Duration:
7 hours

Trainer:
Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $75.90
• Non-MOE participants - $562.75

This course provides the opportunity for teachers and school key personnel to experience a real live research lesson (RL) observation and post RL colloquium. Throughout this experience, participants will learn how to observe with a focus on student learning and be exposed to a variety of observation tools. They will discuss their observations in a post-RL colloquium, supported by experienced faculty members of NIE and other resource persons as “knowledgeable others”. This course is offered mainly as a school-based workshop but it can also be cluster-based with teachers and key personnel from different schools. As part of the workshop will involve observing a real live RL, the course facilitator will work with a team of teachers in crafting the RL. Arrangements for crafting the RL will be discussed further with the course facilitator.

Target audience:
All educators

ICT0105 Equipping Facilitators for Lesson Study

Duration:
7 hours

Trainer:
Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee:
(includes 7% GST and $1 copyright fee)
• MOE participants - $75.90
• Non-MOE participants - $562.75

This course provides the opportunity for teachers and school key personnel who are involved in facilitating and leading lesson study (LS) cycles in their own school, to clarify their conceptions and discuss how to continue with and sustain the LS journey. In this course, LS facilitators will discuss challenges of implementation of LS in their own school, and how to steer the discussion in a lesson study cycle. The depth of discussion in this course will depend on the questions raised from the experience of involvement in previous LC cycles by the participants. As such, this course will only benefit participants who have been involved in LS.

Target audience:
All educators
DEVELOPING CURRICULUM CAPABILITIES OF TEACHERS

**ICT0202 Differentiated Instruction for Diverse Learners**

**Duration:** 7 hours  
**Trainer:** Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $75.90  
  - Non-MOE participants - $562.75  
**Target audience:** All educators

This course serves to develop the capacities of school leaders to lead in school-based curriculum design. It challenges school leaders to reclaim ownership as curriculum and pedagogical leaders of the school. Opportunities will be provided for participants to reflect on their personal theory of curriculum and the impact of their personal theory on curriculum decisions regarding goals, objectives, content, structure, assessment, teaching approaches and the scope and sequence of learning experiences.

**ICT0208 Curriculum Decision Making For School Leaders**

**Duration:** 14 hours  
**Trainer:** Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $150.80  
  - Non-MOE participants - $1,124.50  
**Target audience:** All educators

This course serves to develop the capacities of school leaders to lead in school-based curriculum design. It challenges school leaders to reclaim their professionalism as curriculum and pedagogical leaders of the school. Opportunities will be provided for participants to reflect on their personal theory of curriculum and the impact of their personal theory on curriculum decisions regarding goals, objectives, content, structure, assessment, teaching approaches and the scope and sequence of learning experiences.

DEVELOPING ASSESSMENT CAPABILITIES OF TEACHERS

**ICT0300 Assessment Literacy in the Primary/Secondary Classroom**

**Duration:** 14 hours  
**Trainer:** Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $150.80  
  - Non-MOE participants - $1,124.50  
**Target audience:** All educators

This course helps primary/secondary teachers clarify their understanding of assessment, teaching and learning within the context of Singapore’s ‘Holistic Assessment’/‘Balanced Assessment’ aspiration. They should be able to develop an assessment plan with suitable emphasis on assessment for learning at the departmental or school-wide level to build coherence of formative and summative assessment practices.

**ICT0323 Student Self-Assessment: 5 Ws and 1 H**

**Duration:** 10 hours  
**Trainer:** Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $108.00  
  - Non-MOE participants - $803.50  
**Target audience:** All educators

This Student Self-Assessment workshop hopes to provide teachers with a better understanding about student self-assessment (what) and its potential benefits to teachers and students (who and why). The workshop will look at how to set the stage for the implementation of self-assessment in the classroom (where), introduce a variety of self-assessment strategies (what and how) as well as discuss the issues and challenges of implementing student self-assessment (when and how). There will also be a hands-on session for teachers to work together to co-design self-assessment for their students’ use.

**ICT0324 Nurturing Self-Regulated Learners through Assessment Practices**

**Duration:** 10 hours  
**Trainer:** Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $108.00  
  - Non-MOE participants - $803.50  
**Target audience:** All educators

This workshop hopes to provide teachers with a better understanding of self-regulated learning (SRL). It will focus especially on shaping classroom assessment practices to nurture SRL, as well as discuss the complexities involved. There will also be many hands-on opportunities for teachers to plan for application of course content in their lessons.

**ICT0325 Designing Quality Alternative Assessments and Associated Rubrics**

**Duration:** 10 hours  
**Trainer:** Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group  
**Course fee:** (includes 7% GST and $1 copyright fee)  
  - MOE participants - $108.00  
  - Non-MOE participants - $803.50  
**Target audience:** All educators

There is a growing recognition that we need a variety of assessment types in schools. These different assessment methods will help bring balance to the emphasis on conventional paper-and-pen tests, cater to diverse student abilities and cover a wider range of learning outcomes. Careful consideration is therefore required in evaluating and selecting alternative assessments that can deliver on these intended outcomes. Frameworks for designing alternative assessments and rubrics will be presented in this course. Participants will also be introduced to the salient issues involved in such alternative assessments. At the end of the course, participants will be able to make informed choices based on fundamental assessment principles.

**Target audience:** All educators
IEL1045 Grammar for Assessment (Primary)

Duration: 24 hours

Trainer: Faculty from the English Language and Literature (ELL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $257.80
- Non-MOE participants - $1,027.00

This course aims to introduce participants to core prescriptive grammatical knowledge required in assessment papers. The course will be conducted through eight sessions (3 hours each). Participants will also be introduced to different grammar references, including Michael Swan’s Practical English Usage, which is given to all schools and which they can utilise in the classroom.

By the end of the course, participants should be able to explain grammar questions/answers commonly found in assessment papers, using the knowledge gained in the course.

Target audience: Primary school teachers

ICT0415 Developing Critical and Inventive Thinking through Design Projects

Duration: 6 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $65.20
- Non-MOE participants - $482.50

This course explores a way of teaching and learning critical thinking skills and inventive thinking skills through a single programme or project. By experiencing the learning process themselves, participants will examine how design projects can be used to develop students’ critical and inventive thinking skills.

Target audience: All educators

ICT0407 Talk in our Classroom

Duration: 7 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $76.00
- Non-MOE participants - $562.75

This course promotes a new culture of teacher and student talk in the classroom that goes beyond the IRE/F (Initiation-Response-Evaluation/Feedback) interaction mode. This workshop promotes dialogic teaching, which has the potential to engage learners, stimulate and extend their thinking, and advance their learning and understanding across subjects. This course aims to prepare teachers for handling the C2015 policies of maximising students’ learning outcomes, in particular, Self-directed Learning (SDL) and SEL (Social-Emotional Learning) competencies. Dialogic talk may also be used as a powerful tool for scaffolding formative assessment events in the classroom and will help participants in their understanding of talk, questioning strategies and formative assessment.

Target audience: All educators

ICT0416 Design Thinking as a Methodology for Developing 21st Century Skills and Competencies: Introduction for Educators

Duration: 3 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $33.10
- Non-MOE participants - $241.75

In this introductory workshop, participants will learn what design thinking is, with a focus on understanding the core values and sensibilities of the design thinker. They will experience the design thinking processes in a hands-on activity, and then critically explore how design thinking may be used to develop 21st century skills and competencies in schools.

Target audience: Secondary school teachers

ICT0417 Design Thinking: Tools and Methods

Duration: 14 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $150.80
- Non-MOE participants - $1,124.50

This course introduces participants to the concept of design thinking, as well as to a basic set of design thinking tools and processes. Participants will immediately put into practice the tools and processes they have learned as they attempt to create innovative solutions to solve a real-world human problem. The course ends with an exploration of possible ways of applying design thinking tools and processes in Singapore schools.

Target audience: All educators
ICT0419 Dialogic Argumentation: Development of Thinking and Expository Writing

Duration: 7 hours

This course will introduce participants to the practice of dialogic argumentation. We explore the theory of how social argumentation mirrors individual thinking and is thus a productive path to developing 21st century dispositions and thinking values. The curriculum is a structured approach designed to help students debate broad issues represented by 2 opposing perspectives. Research evidence shows that repeated practice of dialogic argumentation improves students' expository essay writing, as expository essay writing requires a high-level ability to integrate multiple perspectives and evidence. Participants will engage in dialogic argumentation with each other in order to better understand the argumentation process. Time will also be set aside for participants to discuss issues of implementation in the classroom.

Target audience: All educators

IEC0104 Read, Feel, and Serve: Scaffolding the Teaching of SEL through Multicultural Picturebooks

Duration: 24 hours

This 24-hour stand-alone professional learning course aims to empower educators to Read, Feel and Serve. Specifically, it aims to build the capacity of teachers to facilitate the introduction of social and emotional learning (SEL) competencies in the classroom with the aid of authentic, high-quality multicultural picturebooks (MPB). As Singapore is increasingly becoming even more multicultural with the influx of people coming from various parts of the globe, the Ministry of Education emphasises the importance of instilling soft-skills to the Singapore youth. Apart from being viewed as a cognitive tool, MPB will be used to facilitate soft-skills training as seen in social and emotional understanding and competencies. It is hoped that through this PD workshop, teachers can have more concrete tools to build a more inclusive community that regards diversity as a lived and felt reality through the use of MPB.

Target audience: Primary school teachers

IEL2087 Teaching Julius Caesar

Duration: 7 hours

This course will introduce dramatic, kinaesthetic, student-centred and writing strategies for introducing and teaching William Shakespeare’s play Julius Caesar both stimulatingly and effectively to ‘O’ Level Literature students. You will learn how to help and facilitate your students in independently unpacking Shakespeare’s colourful and originally rich language in illuminating ways; initially in discussion and other preparatory activities, and ultimately in genuine, informed and personally unique written responses to the ‘O’ Level question.

Target audience: Secondary school teachers

IEL2088 How to Read and Fruitfully ‘Unpack’ Poems

Duration: 7 hours

This course is for teachers who want to teach more poetry and gain more confidence and experience in reading, and in helping their students read and unpack all kinds of poems, from William Wordsworth’s Daffodils to Alfian Sa’at’s Void Deck. Postig that initial confusion and curiosity in encountering a poem (even in a teacher!) is a good, pedagogically authentic thing. The course will focus on modelling the process of first encountering and then gradually but steadily opening up the varied possible meanings and interpretations of a range of poems. The second half of the course will provide tips in piquing students’ interest in poetry, and therefore improving their skills as readers, by choosing potentially exciting, relevant poetry, often surprisingly resonant with local students’ lives and passions.

Target audience: Secondary school teachers

Learning dimensions:
IEL2089 Teaching John Wyndham’s The Midwich Cuckoos

This course will introduce strategies for introducing and teaching a new addition to the ‘O’ Level syllabus: John Wyndham’s vintage English science fiction novel The Midwich Cuckoos. These stimulating kinaesthetic student-centred, context and discussion-based activities will help students respond informedly, personally, perceptively and uniquely to Wyndham’s novel; and help to focus students’ answers when responding to ‘O’ Level examination questions on the text.

Target audience:
Secondary school teachers

Learning dimensions:
2 3 5

IEL0007 Designing and Assessing Students’ Digital Storytelling

Emerging new media (e.g., mobile and web-based interactive platforms for creating, sharing, discussing and modifying user-generated content), and the rapidly changing needs and capabilities of students, place rising demands on educators to rethink their classroom practices. But how can we understand and draw on the presence of digital technologies for contemporary meaning-making and communication using a variety of representational formats (e.g., writing, images, gestures and sounds)? Based on the long-standing use of stories in societies and cultures to inform, educate and entertain; this in-service course explores the ground between new media and teaching through a hands-on consideration of the potentials of subject- or topic-based digital storytelling by students.

Target audience:
All educators teaching Secondary and Junior College levels

Learning dimensions:
2 3

ILS0008 Technological Pedagogical Content Knowledge for ICT Lesson Design

Integrating ICT into teaching and learning is a complex endeavour that requires careful consideration of technology and pedagogy. Recently, the emergence of the technological pedagogical content knowledge (TPACK) framework has unpacked the types of knowledge that teachers/ instructors needed in order to enhance learning with ICT. This course equips teachers with the basic knowledge of the TPACK framework. It engages the teachers to review their lessons and ICT-based learning resources and facilitate the design of ICT lessons through the TPACK framework. At the end of the course, it is hoped that the participants are more able to draw from various sources of knowledge to create ICT integrated lesson at a higher level.

Target audience:
All educators

Learning dimensions:
2 3

Duration:
7 hours

Time:
9.30am to 5.30pm

Trainer:
Faculty from the English Language and Literature (ELL) Academic Group

Course fee:
• MOE participants - $75.90
• Non-MOE participants - $562.75

Duration:
21 hours

Time:
2.30pm to 5.30pm

Trainer:
Dr Phillip A. Touwendrow

Course fee:
• MOE participants - $225.70
• Non-MOE participants - $1,686.25

Duration:
3 hours

Trainer:
Faculty from the Learning Science and Technology (LST) Academic Group

Course fee:
• MOE participants - $33.10
• Non-MOE participants - $241.75
ILS0015 Designing Lesson with 3D Printing Technology

Duration: 8 hours
Trainer: Mr Liang Hong Poh
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $643.00

With the advancement and affordability of 3D printing technology, classroom teachers can now use this technology and apply it to classroom teaching. 3D printing changes students’ role and disposition from one that is teacher directed towards becoming self-directed and independent learners. Teachers can leverage the affordances of 3D printing into designing a lesson that engages students in exploring, designing and share new and innovative ideas.

Target audience: All educators

ILS0016 Designing 21st Century Quality Learning (21QL) Using LEGO EV3

Duration: 8 hours
Trainer: Mr Liang Hong Poh
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $643.00

Using robotic technology in classroom teaching, allows and encourages students to be creative and innovative. It also allows them to learn actively in different authentic scenarios. The collaborative learning processes demand that students constantly monitor their actions and decisions. Their reflection on their decisions will help them reach quality solutions. Teachers can leverage the affordances of LEGO EV3 into designing 21QL lessons that engage students to think innovatively and create valuable knowledge to address authentic problems and challenges of today’s world.

Target audience: All educators

ILS0017 Using and Creating Video for Student Learning

Duration: 8 hours
Trainer: Dr Teo Yiong Hwee
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $643.00

In this new information age, many schools and institutions extensively utilise videos in training and education courses. Videos are also key to the success of blended learning and flip teaching. This short course illustrates the strengths and limitations of both audio and video media. The different genres of video will also be discussed. This course discusses how and when to use video and includes practice on how to create a video for flipped teaching using mobile phones, PowerPoint Mix and IPADS.

Target audience: All educators

ILS0018 Play, with ICT!

Duration: 3 hours
Trainer: Mr Louis Quek Wee Kwan
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $33.10
- Non-MOE participants - $241.75

What is your vision of a future classroom? What is your vision of an ideal classroom? If you think it should be fun, engaging, and where meaningful learning takes place, join us in exploring the utilisation of ICT platforms to break the monotony of classroom teaching and learning. Gain insights on the affordances of various tools and share your perspectives on how teachers can better facilitate students’ learning. Have fun trying, experiencing, and creating ICT resources; and translate these practices into your classroom!

Target audience: All educators

ILS0019 Flip Your Lessons for Meaningful and Differentiated Learning

Duration: 8 hours
Trainer: Mr Tsering Wangyal
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $643.00

Flipped learning pedagogy is gaining traction with teachers and students across the globe because of its potential to redefine the whole enterprise of teaching and learning thanks to the new possibilities afforded by rapidly evolving technologies. Proponents of flipped learning cite increased learner engagement, more timely feedback, and deeper and more meaningful learning due to better use of curriculum time. If you have heard your colleagues talk about flipping their lessons and wondered what it is and how to go about flipping your own lessons, this is the right workshop for you.

Target audience: All educators

ILS0020 Designing Student Online Collaboration Supported by Social Media Tools

Duration: 8 hours
Trainer: Mr Tsering Wangyal
Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $643.00

With the ever-growing availability of social media tools, classroom teachers can leverage on tools such as messages, voice, images and shared resources to engage students in exploring new ways to communicate with peers in purposeful online collaborative projects. To facilitate students’ learning in collaborating effectively in small groups and across different cultural settings, the choice of social media tools, the instructional strategies and the quality of collaborative learning require thoughtful designing and implementing.

Target audience: All educators
ILS0021 Exploring the use of technology in classroom assessments

**Duration:**
8 hours

**Trainer:**
Dr Connie Ng

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $86.60

The availability of online tools offers opportunities for educators to tap into the potential of technology in classroom assessments. If you have not used any common online tools for assessments before but would like to explore how to do so, this course is for you. This course will introduce participants to common online tools that can be incorporated into classroom teaching and learning. In this introductory course, participants will explore the basic features of online tools and deliberate on the potential and challenges of using such tools in classroom assessments.

**Target audience:**
Teachers with no experience using any online tools for classroom assessment

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ILS1002 Supporting Self-Directed and Collaborative Learning with ICT

**Duration:**
8 hours

**Trainer:**
Faculty from the Learning Science and Technology (LST) Academic Group

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $86.60
- Non-MOE participants - $86.60

Participants will be introduced to the key concepts of self-directed and collaborative learning. These concepts will be explored through worked examples. Participants can expect to work in groups to design tasks that incorporate self-directed and collaborative learning for teaching and learning. Discussions on issues relating to lesson design, facilitation and use of ICT to support self-directed and collaborative will also be raised in the course.

**Target audience:**
All educators

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IME1028 Error Analysis and Remediation

**Duration:**
12 hours

**Trainer:**
Associate Professor Ng Swee Fong

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

Not all mistakes are careless mistakes. The mistakes made by children may be symptomatic of some underlying misconceptions. Such errors are defined as systematic errors. Unless teachers understand why children make such mistakes, re-teaching the concept would not be helpful to these children. In this course, examples of systematic errors involving counting, whole numbers and the four operations are analysed to understand why children make such errors.

**Target audience:**
Open to any individual who wishes to understand why primary children make the errors with the four operations and help them

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IME1029 Using the SPUR Framework to Assess Primary Pupil Understanding in Mathematics

**Duration:**
12 hours

**Trainer:**
Professor Berinderjeet Kaur

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

SPUR (S-skills, P-properties, U-uses, R-representations) is a multi-dimensional framework for assessing understanding of mathematics. The course will ensure that students have a robust understanding of how mathematics assessment tasks should assess Skills, Properties, Uses and Representations of the knowledge they acquire. This course will introduce participants to the framework and provide them with the knowledge and skills to use in their classroom instruction.

**Target audience:**
Primary school Mathematics teachers

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IME1032 School-based Mathematics Curriculum Development

**Duration:**
24 hours

**Trainer:**
Associate Professor Lee Ngan Hoe

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $257.80
- Non-MOE participants - $1,927.00

This course provides experienced primary mathematics teachers with the knowledge and skills needed to plan, implement and evaluate mathematics curriculum innovations at the school level.

**Target audience:**
Primary school Mathematics teachers

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IME1042 Challenging Mathematically Able Lower Primary Pupils

**Duration:**
12 hours

**Trainer:**
Dr Koay Phong Lee

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

Like the pupils in the Learning Support Mathematics (LSM) programme, mathematically able pupils in the standard classroom are also at risk of underperforming in school. These pupils need to be exposed to an adequately challenging learning environment. The course explores some strategies and learning activities that teachers can adopt to cater to the needs of these pupils.

**Target audience:**
Primary school teachers

**Learning dimensions:**
- 3
- 4
IME1043 Using Children’s Literature to Promote Learning of Lower Primary Mathematics

**Duration:**
12 hours

**Trainer:**
Dr Koay Phong Lee

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

Children like reading stories. One way to engage children in learning mathematics is to integrate children’s literature into their mathematics lessons. This course examines how children’s literature can be used as a vehicle for designing activities to help children learn mathematics and develop their process skills in mathematics.

**Target audience:**
Primary school teachers

**Learning dimensions:**

| 3 | 4 |

IME2079 Using the SPUR Framework to Assess Secondary Pupil Understanding in Mathematics

**Duration:**
12 hours

**Trainer:**
Professor Berinderjeet Kaur

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

SPUR (S-skills, P-properties, U-uses, R-representations) is a multi-dimensional framework for assessing understanding of mathematics. The course will ensure that students have a robust understanding of how mathematics assessment tasks should assess Skills, Properties, Uses and Representations of the knowledge they acquire. This course will introduce participants to the framework and provide them with the knowledge and skills to use in their classroom instruction.

**Target audience:**
Secondary school Mathematics teachers

**Learning dimensions:**

| 3 | 4 | 5 | 7 |

IME2090 Engaging the Minds and Hearts of Mathematics Learners

**Duration:**
12 hours

**Trainer:**
Dr Joseph Yeo Boon Woei

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

This course will prepare secondary school teachers to put into practice various strategies to engage students actively in their minds and hearts when learning mathematics. It will guide teachers to search for resources or to develop their own materials, such as guided-discovery worksheets (with or without the use of concrete manipulatives and/or ICT), catchy maths songs, amusing maths videos, witty comics, intriguing maths puzzles and games, fascinating magic tricks, inspiring stories of famous mathematicians, celebration of important maths days and years, and interesting real-life examples and applications.

**Target audience:**
Secondary school teachers

**Learning dimensions:**

| 3 | 4 | 5 | 7 |

INS2104 Pollution Experiments Using Ecotoxicology Biomarkers for Schools

**Duration:**
24 hours

**Trainers:**
Dr Beverly Goh and Dr Tan Lik Tong

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $257.80
- Non-MOE participants - $1,927.00

This course combines project-based learning that integrates biology and chemistry in experimental field studies on ecotoxicology, and collaboration with a Singapore government agency (NParks) in a citizen science programme. Participants (teachers with their pupils) will experience the rigour of content-based research through authentic experimental protocols used in field bio-monitoring associated with environmental health indicators.

**Target audience:**
Junior College and Secondary school teachers

**Learning dimensions:**

| 3 | 4 | 5 | 7 |

IPE0026 Coaching Children in Sports

**Duration:**
20 hours

**Trainer:**
Associate Professor Koh Koon Teck

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $215.00
- Non-MOE participants - $1,606.00

This course is designed to equip coaches and teachers with the necessary skills and knowledge in dealing with children who are involved in recreation and developmental sports. This course provides an introduction to the theory of coaching and learning in the school sports setting and will cover various aspects relating to effective coaching of children for training and competition. The course will have a mix of practical and theoretical aspects to equip coaches and teachers the necessary skills for developing basic knowledge and skills for coaching children involved in sports.

**Target audience:**
Primary school coaches and teachers

**Learning dimensions:**

| 3 | 4 | 5 | 7 |
IPE0027 Coaching Youths in Sports

Duration: 20 hours

Trainer: Associate Professor Koh Koon Teck

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $215.00
- Non-MOE participants - $1,006.00

This course is designed to equip coaches and teachers with the necessary skills and knowledge in dealing with young athletes who are involved in recreation and developmental sports in schools. This course provides an introduction to the theory of coaching and learning in a school sports setting. It covers various aspects relating to effective coaching of young athletes for training and competition. The course will have a mix of practical and theoretical aspects to equip coaches and teachers with the necessary skills for developing basic knowledge and skills to deal with young athletes effectively in sports.

Target audience: Secondary school and Junior College coaches and teachers

ICT0504 Action Research for Schools

Duration: 7 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $75.00
- Non-MOE participants - $562.75

Action research in education is an essential part of teachers' professional growth. It aims at promoting teachers’ reflection and refinement on their practices, producing local/contextual knowledge, and sharing this knowledge with professional communities. In this course, we introduce the qualitative methods in action research, data analysis in qualitative action research, and consideration of qualitative and quantitative methods in action research on teaching. This course is designed to help teachers to acquire competencies in designing, using and evaluating this methodology for the purpose of professional development.

Target audience: All educators

 ICT0505 Qualitative Research for Education Practitioners

Duration: 14 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $150.80
- Non-MOE participants - $1,124.50

By the end of the course, participants will be able to give due consideration to the concepts, principles and theories underlying qualitative educational research designs and methods and provide a clear rationale for using qualitative methods and analysis for their own action research studies. Participants will design a rigorous qualitative study in terms of data collection and analysis and interpret, discuss, and write up findings derived from data collected from field research.

Target audience: All educators

 Reeves0001 Classroom Management

Duration: 7 hours

Trainer: Faculty from the Learning Sciences and Technologies (LST) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $75.00
- Non-MOE participants - $562.75

Using small group discussions, facilitated by school practitioners, and a case study approach, this full-day course serves to equip primary/secondary/Junior College teachers with the principles of classroom management and knowledge of a range of strategies to manage their classrooms to bring about effective learning. Teachers will also gain awareness on how positive Teacher-Student Relationship (TSR) can help them with classroom management. Teachers' classroom cases are also used for collaborative problem-solving, discussion and presentations.

Target audience: All educators

The Problem Wheel – A metacognitive approach to “kickstart” students’ mathematical problem solving

Duration: 12 hours

Trainer: Associate Professor Lee Ngan Hoe

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

This course is to provide primary mathematics teachers with a metacognitive means to “kickstart” the problem-solving process in primary mathematics students.

Target audience: Primary school Mathematics teachers

ICT0500 Teaching Inquiry through Reflective Practice

Duration: 7 hours

Trainer: Faculty from the Curriculum, Teaching and Learning (CTL) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

Reflective Practice serves to provide teachers with the capacity to look into the work they do every day so as to shape meaningful practice from the various events and situations that they confront in the daily grind of their practice. In this course, we introduce teachers to the theories and practice of reflection, and ways to make reflection a meaningful habit to support their work.

Target audience: All educators

ENHANCING THE PROFESSIONALISM OF TEACHERS
Teacher Leadership for Effective PLC Facilitation

Professional Learning Communities (PLCs) have become increasingly popular in the local education scene. This is not surprising bearing in mind that PLCs, when done right, have the potential to increase the collective capacity of school organisations. At a more microscopic level, PLCs have immense potential to bring about the development of teacher knowledge, and thus having an impact on improvements in teacher teaching practice, student learning, and student learning outcomes. However, this sequence of school improvement is very much dependent on the quality of teacher learning that takes place in PLCs. Just as the quality of teacher learning can vary from one mentoring relationship to another and from one workshop to another, the quality of teacher learning in PLCs will expectedly vary from one PLC to another. PLCs, like any other group situation, are and cannot be devoid of leadership – in this case, teacher leadership, given that the members of PLCs usually and predominantly consist of teachers. The quality of teacher learning is therefore reliant on the quality of teacher leadership. This assertion, however, begs further questions. Who are the potential candidates for teacher leaders in PLCs? What are the knowledge, skills and disposition that teacher leaders ought to have? How are they to be developed?

The series of workshops planned for this course seek to provide the learning spaces for potential teacher leaders to hone in and sharpen their knowledge, skills and disposition on teacher leadership to bring about positive teacher learning in PLCs. By the end of the course, teacher leaders will be able to: 1) Articulate the key features of PLCs, 2) Identify the key characteristics of teacher leadership, 3) Unpack the effects of teacher leadership in PLCs on teacher knowledge, teaching practice, student learning, and student learning outcomes, 4) Outline and demonstrate the concepts and principles of teacher leadership in PLCs, 5) Specific and demonstrate the 3 stages of PLC participation, 6) Articulate and demonstrate the 5 PLC conversation questions, 7) Enunciate and demonstrate the 7 PLC conversation activities. The modes of learning include lecture, group discussions, demonstrations, exemplars, and simulations.

Target audience: All educators

IPE0025 Sports Injury: Prevention and Management (for PE and Sports CCA Teachers)

This course is designed to provide physical education teachers with the fundamental knowledge and skills to understand the growth-related biological aspects, risk factors, causes and mechanisms of injuries in PE and youth sports with a specific emphasis on physical education settings in schools. The course will also include the principles and strategies of prevention and management of injuries in PE and youth sport.

Target audience: Trained PE teachers

IPE0028 Psychological Preparation for Athletes in Sports

This course helps coaches and teachers become more knowledgeable in terms of the mental demands of sports in competition. This course also provides an introduction to applied sport psychology in the school setting. This course introduces various mental skills for training to help athletes in training and competition. A mix of practical and theoretical aspects of this course will equip coaches and teachers with the necessary skills for developing basic mental skills training for athletes.

Target audience: Coaches and teachers

IPE0037 Strength and Conditioning (for PE and Sports CCA teachers)

This course is designed to equip participants with research-based knowledge of strength and conditioning and how it can help improve physical fitness, and performance in sports for students and student-athletes. Participants will be taught to design a specific “Strength and Conditioning” training plan using the knowledge in training principles, exercise physiology, plyometric, speed and agility.

Target audience: PE and sports CCA teachers
IME2073 Enhancing deeper understanding of calculus and students’ difficulties

We will have interactive discussions of some main calculus concepts and the concerns we have in teaching calculus. Students’ common errors found in some past Cambridge exam papers will be highlighted as well.

Duration: 6 hours

Trainer: Associate Professor Toh Tin Lam

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $65.20
- Non-MOE participants - $482.50

Target audience: Secondary school and Junior College teachers

IME2076 What has elementary number theory got to do with school arithmetic?

Arithmetic is the very first topic covered in secondary one mathematics. Students learn about factors, primes, prime factorisation, highest common factor and lowest common multiple. One application of prime factorisation is finding square roots and cube roots of whole numbers. For example, to find the square root of 2025, we express 2025 as a product of primes \(3^4 \times 5^2\), from which we obtain the answer \(3 \times 5\). On the other hand, the square root of 200 is not a whole number because 200 = \(2^3 \times 5^2\) and the power of 2, which is 3, is odd. In contrast, we cannot say that the square root of 324 = \(27 \times 12\) is not a whole number because the power of 27 is odd. Of course, we argue that we cannot make this conclusion because 27 x 12 is not a prime factorisation of 324. So what is so special about prime numbers? Why do we have to write a whole number N in prime factorisation form to determine conclusively whether the square root of N is a whole number or not? In this course, we shall discuss the mathematical principle behind this, and also explain why the algorithm for finding HCF and LCM using prime factorisation works.

We shall also touch on the representation of real numbers in decimals. What is the difference between rational and irrational numbers written in decimals? How do we know whether a fraction m/n written in decimal is terminating or non-terminating (2/5 = 0.4 is terminating, 2/3 = 0.666… is non-terminating)? These questions can be answered using elementary number theory.

We will also discuss some real-life applications of number theory; for example, how is the official reference of NRIC No., or the ISBN of books, obtained? We shall share some interesting mathematical puzzles involving number theory. For example, can you get four gallons of water using five and three gallon jugs with no markings? (In the movie “Die Hard 3”, John McClain (played by Bruce Willis) and Zenus (played by Samuel L. Jackson) have to solve this puzzle posed by the villain Peter Krieg (played by Jeremy Irons) in order to defuse a bomb. Had the villain asked them to get four gallons using three and six gallons jugs, would they be able to solve it?)

Target audience: Secondary school Mathematics teachers

Duration: 9 hours

Trainer: Dr Toh Tin Lam

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $97.30
- Non-MOE participants - $723.25
**IME1041 Strategies to Teach Primary 1 to Primary 3 Low Progress Pupils to Solve Mathematical Process Problems**

**Duration:**
12 hours

**Time:**
9:00am to 4:00pm

**Trainer:**
Dr Joseph Yeo Kai Kow

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

Process problems require pupils to develop general strategies for understanding, planning, solving problems as well as evaluating possible solutions. Process problems can be presented as word problems. This course will provide Primary 1 to Primary 3 mathematics teachers with the necessary knowledge and skills for teaching problem-solving in the mathematics classroom. Teachers will identify the factors that contribute to low-progress learners' difficulties in mathematical problem solving. Teachers will also be led through the various strategies to help low-progress pupils solve process problems. As part of the course, teachers will also adapt and design process problems/tasks to meet varied learning needs and interests as well as evaluate the effectiveness of these. Problem-solving frameworks and checklists to help low-progress pupils solve mathematical problems will also be shared and discussed.

**Target audience:**
Primary school teachers

**Learning dimensions:**

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**IME1025 Designing Learning Activities that Integrate Learning Experiences in Primary 1 and Primary 2 Mathematics**

**Duration:**
12 hours

**Trainer:**
Faculty from the Mathematics and Mathematics Education (MME) Academic Group

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

This course focuses on ways to integrate learning experiences to engage lower primary pupils in learning mathematics. Participants will examine the use of various resources and instructional strategies that promote sense-making and reasoning among young children.

**Target audience:**
Primary school teachers

**Learning dimensions:**

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**IME1037 Formative Assessment in Primary Mathematics: Effective Implementation and Practice**

**Duration:**
12 hours

**Trainer:**
Faculty from the Mathematics and Mathematics Education (MME) Academic Group

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

The focus of this course is on how to develop formative assessment tasks as part of teaching and learning in primary mathematics classrooms.

**Target audience:**
Primary school Mathematics teachers

**Learning dimensions:**

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**IME1040 Promoting Metacognition in Primary School Children**

**Duration:**
12 hours

**Trainer:**
Faculty from the Mathematics and Mathematics Education (MME) Academic Group

**Course fee:**
(includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

The focus of this course is to equip teachers with approaches to address metacognition in the primary mathematics classroom.

**Target audience:**
Primary school Mathematics teachers

**Learning dimensions:**

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IME2081 Teaching H2 Further Mathematics: Applications of Integration and Numerical Methods

Duration: 12 hours

Trainer: Faculty from the Mathematics and Mathematics Education (MME) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

This course focuses on content knowledge related to the teaching of applications of integration and numerical methods in H2 Further Mathematics.

Target audience: Junior College teachers

Learning dimensions:

IME2084 Teaching H2 Further Mathematics: Matrices and Linear Spaces

Duration: 15 hours

Trainer: Faculty from the Mathematics and Mathematics Education (MME) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $161.50
- Non-MOE participants - $1,204.75

This course is a review of some topics in linear algebra that are relevant to the H2 Further Mathematics topics on matrices and linear spaces.

Target audience: Junior College teachers

Learning dimensions:

IME2055 Metacognition in the Mathematics Classroom

Duration: 12 hours

Trainer: Faculty from the Mathematics and Mathematics Education (MME) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

The aim of this course is to extend teachers’ knowledge and understanding of the development of fractions. This course also assists teachers in developing lessons on fractions using innovative approaches that promote thinking.

Target audience: Secondary school Mathematics teachers

Learning dimensions:

IME2066 Effective Questioning and Facilitation Techniques for Secondary Mathematics Teachers

Duration: 12 hours

Trainer: Faculty from the Mathematics and Mathematics Education (MME) Academic Group

Course fee: (includes 7% GST and $1 copyright fee)
- MOE participants - $129.40
- Non-MOE participants - $964.00

This course is designed for secondary mathematics teachers who wish to enhance their repertoire on the effective use of questioning and facilitation practices in the teaching of mathematics. It will engage the participants in analysing their current questioning and facilitation practices and trialing “new” techniques based on the Singapore mathematics curriculum framework. They will share their experiences during face-to-face sessions.

Target audience: Secondary school Mathematics teachers

Learning dimensions:

IME2096 Design capacity for mathematics replacement units

Duration: 12 hours

This is NOT a course – at least, it does not fit into the conventional image of “attending a course”. In these mixed-purpose sessions, we cut through ‘the layers’ by going straight to the challenges of actual mathematics instruction – we design materials that will help our students learn better. In the process, we will learn more about mathematics, our students, and design.

Target audience: Secondary school Mathematics teachers

Learning dimensions:

For more information about professional learning courses at NIE, please visit www.nie.edu.sg/gpl/pd/courses or email us at inservice@nie.edu.sg
Examples of Customised School-Based Workshops in 2017

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Getting To Know Our Students
Nur Hafizah Binte Hamir, Advanced Diploma in Special Education (ADISE) graduate

At which point in your career did you aspire to pursue your programme?
I always look forward to learning more about special needs. My reporting officer (RO) who is also my school’s Vice Principal always encouraged me to pursue specialised courses for my professional development. After graduating with a Diploma in Special Education (DISE) in 2013, DISE in Dyslexia Studies in 2015 and Bachelor of Arts in English Language and Literature in 2016, I embarked on the Advanced Diploma in Special Education (ADISE) at NIE. Teachers are learners first and we need to be ready to learn new tools.

What attracted you to your chosen programme at NIE?
A fellow Allied Educator (Learning and Behavioural Support) (AED (LBS)) who had attended the programme previously, recommended me to do the same. My RO and the school’s Learning Support Coordinator were also supportive.

How would you describe your interactions with NIE faculty members?
NIE faculty members are FUN! Friendly, Understanding and Not-your-typical-lecturers. They taught us how to delve into issues to gain broader and deeper perspectives. I want to emulate them in becoming a good mentor to new AEDs (LBS) and Beginning Teachers, as well as continue to advocate for students with special needs.

Could you share with us some interesting facets of your programme?
After having worked in the special education system for several years, I could not help but to wonder if I was becoming stagnant in my role. The programme made me reflect on theateness in school and helped me get out of that comfort zone.

Has the programme been beneficial to you in bringing forth changes in your school?
I was able to capitalise on different courses to propose and implement changes in my school. For example, “Practical Behaviour Management” provided me with the resources to create a new behavioural identification tool. Together with a CMT member, I developed a two-page referral form and checklist that could be used to specifically identify a student’s behavioural issues.

Would you recommend the programme to someone else? What would you say about it?
Yes! We are educators. We must remain relevant and keep up with new teaching practices. You may face challenges in the programme but the valuable friendships and knowledge you gained will be worthwhile! We are here because we love our students. We want our students to change and learn new things and so we shall do that first!
### CURRICULUM, TEACHING AND LEARNING

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### DESIGN AND TECHNOLOGY

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### EARLY CHILDHOOD AND SPECIAL NEEDS

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<tr>
<td>IEL1502 Reading &amp; Vocabulary (Primary)</td>
<td>9 &amp; 10</td>
<td>10 &amp; 17</td>
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<tr>
<td>IEL2085 Reading &amp; Vocabulary (Secondary)</td>
<td>17 &amp; 24 &amp; 31</td>
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<tr>
<td>IEL1503 Teaching Writing (Primary)</td>
<td>19 &amp; 24</td>
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<tr>
<td>IEL2070 Interpreting Drama Texts through Performance</td>
<td>26</td>
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<tr>
<td>IEL2071 Understanding Drama as Text and Performance</td>
<td>27</td>
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<tr>
<td>IPD1006 Holistic Assessment-Performance Tasks: For Primary 1 and Primary 2 Teachers (English)</td>
<td>12</td>
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<td>IEL2086 Teaching Writing (Secondary)</td>
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### MATHEMATICS

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<tr>
<td>IME2035 Algebra in Secondary Elementary Mathematics</td>
<td>9, 16, 23 &amp; 30</td>
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<tr>
<td>IME1046 Geometry: Developing Spatial Visualisation (Upper Primary)</td>
<td>10, 17, 24 &amp; 31</td>
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<tr>
<td>IME2095 Teaching A-Level Mathematics Using Real-World Contexts</td>
<td>13, 20, 27 Jul &amp; 3 Aug</td>
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<tr>
<td>IME2041 Teaching of Calculus in Secondary Additional Mathematics</td>
<td>13, 20, 27 Jul &amp; 3 Aug</td>
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<td>IME4404 School-based Curriculum Development in Mathematics</td>
<td>13 Aug to 9 Oct (Monday)</td>
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<tr>
<td>IME4410 School-based Assessment Practices in Mathematics</td>
<td>13 Aug to 9 Oct (Monday)</td>
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<td>IME4405 Mathematical Processes in Numbers</td>
<td>14 Aug to 9 Oct (Tuesday)</td>
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<tr>
<td>IME4420 Mathematical Processes in Data Handling</td>
<td>14 Aug to 9 Oct (Tuesday)</td>
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### PHYSICAL EDUCATION

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<tr>
<td>IPE2026 Coaching Children in Sports</td>
<td>21 &amp; 22</td>
<td> </td>
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### SCIENCE

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<tbody>
<tr>
<td>INS1015 An Integrated Thematic Approach to Teaching Primary Science</td>
<td>10 &amp; 11</td>
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<tr>
<td>INS4404 Cycles in Primary Science</td>
<td>25 Jul to 20 Sep (Wednesday)</td>
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<tr>
<td>INS4462 Topics in Physical Science for Primary Science Teaching</td>
<td>31 Jul to 23 Oct (Tuesday)</td>
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<tr>
<td>INS4467 Topics in Biological Science for Primary Science Teaching</td>
<td>5 Aug to 26 Oct (Monday)</td>
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<td>INS2104 Critical Thinking in Biology</td>
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<tr>
<td>INS209 Inquiry Chemistry for Secondary School</td>
<td>18 &amp; 19</td>
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<tr>
<td>INS2132 Teaching the Revised H1 Chemistry Examination Topics, Revision and Practice</td>
<td>8 &amp; 9</td>
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<td>INS2144 Problem-Solving Experiments Using Endocrinology Biomarkets for Schools</td>
<td>14 &amp; 15</td>
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<tr>
<td>INS2118 Poise in Biotechnology: Molecular Diagnosis</td>
<td>28 &amp; 31</td>
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<td>INS2125 Teaching the Revised H3 Chemistry</td>
<td>30 Mar 2019 to 30 Jun 2019</td>
<td> </td>
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Information is correct as at April 2018
The Institute has a wide range of exciting and interesting courses and programmes for teacher professional development.

The courses offered are in the following subject areas:

- Assessment
- Curriculum
- Design and Technology
- Drama
- Early Childhood
- English Language and Literature
- Geography
- History
- Leadership
- Mathematics
- Music
- Physical Education
- Science
- Social and Emotional Learning
- Social Studies
- Special Needs Education
- Tech-enabled Learning
- Visual Arts

In addition, we offer courses that can be accredited into the following Advanced Diploma programmes:

- Primary English Language Education
- Primary Mathematics Education
- Primary Science Education
- Teaching Early Primary School Years

For more information of the courses and programmes offered, please scan the following QR code:

Alternatively, you can write in to the Professional Development (PD) team to enquire inservice@nie.edu.sg.

**Courses & Programme Listing**

www.nie.edu.sg/gpl/pd

**Course Finder**

www.nie.edu.sg/course-finder

**SKILLSFUTURE WORKSHOPS**

"Understanding educational issues in training and development" workshop series*

This series of workshops will present professionals in the professional education domain with the fundamental knowledge on the issues in adult learning principles, technology and instruction design, as well as change leadership, which are highly relevant to their scope of work. The series will consist of the following workshops:

**Instructional Design for Effective Learning by Assoc Prof Joyce Koh**

Instructional design is the systematic processes undertaken to analyse instructional problems and to design training programmes. This course will provide the participants with an introduction of major instructional design models and the important considerations for developing learning objectives, selecting content, planning instructional strategies, designing instructional materials, as well as the implementation of training programmes.

**Programme Evaluation for Quality Learning by Assoc Prof Chen Wenli**

There is a pressing need for teaching professional to evaluate an education programme (curriculum, course, lesson or a particular intervention) with empirical evidence so as to determine the strength and area for improvement for the programme. This course will introduce the rationale of conducting programme evaluation, evaluation approaches and models, and the procedures for planning, conducting and using evaluations in educational setting.

**Change Leadership for Training and Development by Assoc Prof David Ng**

Many organisations are undergoing change to adapt better to their operating environment. Some launch initiatives to develop themselves into “learning organisations” or “innovative organisations”. Many leaders need to lead change. This workshop explores the challenges of change leadership and how beneficial change can be derived from the foundation of deep learning. It also discusses how a leader can lead an organisation so that it can change in areas of high payoff and develop a platform where innovation can be sustained.

**Transformative Adult Experiences for Deep and Meaningful Learning by Assoc Prof Isabella Wong**

Adult learners have unique developmental and social characteristics and adult education is a unique field of practice. This course explains key principles and processes of empowered adult learning and training and these fundamentals will be explored through the lens of andragogy, defined as “a scientific discipline that studies everything related to learning and teaching which would bring adults to their full degree of humaneness” (Henschke, 1998, p. 8). The course focuses on understanding the critical factors outside the learner (environment and experiential), and factors within the learner (developmental characteristics, differences in learning styles, motivation and knowledge level) and the implications for optimising teaching and learning experiences.

*Use of SkillsFuture Credit and/or subsidies by National Silver Academy is applicable to all workshops.