

**AIMSSEC SUBJECT LEADERSHIP PROGRAMME 7-STEP SEQUENCE OF BLENDED LEARNING COURSES****All courses follow a similar pattern for primary and secondary teachers designed to develop PCK, SCK and IT skills and professionalism**

Course Description	Pedagogic Content Knowledge (PCK)	Subject Content Knowledge (SCK)	Educational Technology (EdTech)
1. MATHEMATICAL THINKING PROBLEM SOLVING & IT IN TEACHING AND LEARNING MATHEMATICS (MT) Online or 7 day residential + 3 months blended learning			
Professional development course taught 36 times since 2003 for 2600 teachers from all SA provinces and East Africa. Three parallel groups of teachers for 3 phases: Primary, Lower & Upper Secondary.	Introduction to the transformative style of teaching for understanding and building skills, lesson planning and what it means to be a reflective practitioner. Two assignments to plan, teach and report on two lessons.	Work across each phase with in-depth focus on the subject content for start of primary, lower & upper secondary. All courses have a subject content exam and school-based assignments during the distance learning phase	Introduction to the internet and searching, electronic communication, WhatsApp, The AIMSSEC App and Google Classroom for downloading and sending files. Word, Excel, and GeoGebra.
2. MATHEMATICAL COMMUNICATION AND LANGUAGE (MCL) Online or 7 day residential + 3 months blended learning			
Professional development focusing on effective teaching in classrooms where the home language and language of instruction are different to improve the understanding of mathematical concepts and the competences of team working and communication (oral and written).	Offering teaching strategies to promote mathematical understanding and mastery of both the language of instruction and the language of mathematics in line with research findings and understanding of the challenges faced in different learning environments.	Focus on teaching the mathematics curriculum through classroom activities promoting effective learning and communication (speaking, reading, writing) of mathematical language and concepts. Awareness of building concepts year by year and need for enrichment and reinforcing the basics.	Further work on Word including Equation Editor and drawing. Excel, GeoGebra, and PowerPoint. Introducing innovative technologies (software, tools, and applications) in this course and subsequent courses, thereby keeping up with technological advancement.
3. DIFFERENTIATION AND INCLUSION IN THE MATHEMATICS CLASSROOM (DIMC) Online or 7 day residential + 3 months blended learning			
Professional development in formative assessment and understanding how to meet the learning needs of high flyers as well as learners with learning difficulties and special needs. Basic introduction to the relevant laws of the country.	Planning lessons to engage a whole class with suitable challenges for all attainment levels to enable all learners to enjoy success. Assignments on planning and teaching lessons and running workshops for other teachers.	Focus on teachers engaging with problem solving and experiencing for themselves 'low entry point high ceiling learning activities' that span the whole phase and also connect to basic ideas, more advanced mathematics and applications.	Introduction to the International Computer Driving License (ICDL) Profile 1 . Advanced word processing, Spreadsheet and Presentation. Cross-references, mail merge techniques, conditional formatting, data sorting, etc.
4. MATHEMATICS, SKILLS AND COMPETENCES FOR EMPLOYMENT (MSCE) Online or 7 day residential + 3 months blended learning			
Collaborative professional development (CPD) on inquiry-based learning and teaching to build skills and competences needed for the 21 st century in everyday life and in work.	Teaching mathematical thinking and logical reasoning and developing competences and skills such as problem solving, communication, team-working, initiative and independent learning.	Work across whole phase with in-depth focus on concept development, progression and mathematical learning activities for the development of skills and competences.	ICDL Educational Technology 2 . Introduction to Database. Introduction to software for handling big data sets. Planning: Lesson Planning, Safety, security and Well-being.
5. CONCEPTUAL DEVELOPMENT & PLANNING FOR TRANSITIONS IN EDUCATION (CDPT) Online or 7 day residential + 3 months blended learning			
Course focusing on progression, development of concepts and meeting the needs of learners going on to their next stage in education.	How to use formative assessment and to prepare learners for exams, to build on what they know, and to move to the next stage of their education	Focus on concept development in the transitions from school years 3 to 4, from 6 to 7 & 8, from 9 to 10 and from 12 or 13 to work, training or HE.	ICDL Educational Technology 3 . Selecting and evaluating ICT resources for teaching and learning. Introduction to coding
6. ACTION RESEARCH IN PRACTICE (AR) Online or 7 day residential + 6 months blended learning			
Teachers are introduced to research methodology and plan and carry out a 6-month Action Research project to improve some aspect of their teaching. They write a mini-thesis.	Introduction to research methods. Teachers choose their research questions, who to involve and how to gather evidence, then they conduct their own research and write a report.	Focus on extending teachers' mathematical knowledge so that they can work effectively to improve learner's understanding of subject content and research their own practice.	ICDL Educational Technology 4 . Managing the Learning Environment. How to use a smartboard.
7. SUBJECT LEADERSHIP TRAINING (SLT) Online or 7 day residential + 6 months blended learning			
Focus on research informed practice and the professional development of lead teachers and subject advisors. Students will be Teaching Assistants and teach on the MT course.	Students will run workshops and mentor other teachers in their home areas for six months, will be filmed in their schools connected online to their tutors, and learn how to use research in planning for teaching and learning.	Focus on in depth understanding of the content of school mathematics curriculum including year 8 for primary, year 10 for lower secondary, and in S. Africa, the Advanced Programme Mathematics for upper secondary. See http://www.ieb.co.za/	Learning to evaluate and harness digital opportunities. Managing a Word Press website.
See http://aiminghigh.aimssec.ac.za for free Lesson Resources and Workshop Guides for Collaborative Professional Development		Primary	Lower Secondary
			Upper Secondary