



کراچی یونیورسٹی

University of Karachi
THE NGDS PILOT PROJECT
The NGDS Workshop Series



Master Trainer

PROFESSOR DR. SYED ARIF KAMAL

Improving the Quality of Mathematics Education in Pakistan

- Aims and Objectives**
- To appraise teachers about state-of-the-art contents and pedagogical techniques in mathematics
 - To develop a state-of-mind in teachers, so that they are constantly seeking new information through the print and the electronic media, as well as educating themselves through discussions and interaction with working scientists
 - To motivate teachers to prepare effective lectures, demonstrations and activities in mathematics using the latest AV- and IT-tools available
 - To train teachers to develop and to conduct quizzes, tests and examinations in mathematics
 - To sharpen their problem-formulating and problem-solving skills in mathematics
 - To involve them in various activities aimed at creating mathematics awareness in our society
 - To provide guidance for chalking out a program of lifelong learning for self in mathematics
 - To assist them in curriculum, textbook and teaching-software development in the subject of mathematics

The First Workshop

Concept Building in Pre-University Mathematics Education

Wednesday, August 12, 2009 (0950h – 1210h)

The Second Workshop

Efficiently and Effectively Conducting Quizzes, Tests and Examinations in Mathematics

Wednesday, August 19, 2009 (0950h – 1210h)

The Third Workshop

Problem Solving in Mathematics

Wednesday, August 26, 2009 (0915h – 1115h)

Venue

Beacon Light Academy, 'O' Levels, E-24/7, Gulshan-é-Iqbal, Karachi 75300
Tel: 3496 9179

Contact Person

Mrs. Yasmeen Salman

Master Trainer

Professor Dr. Syed Arif Kamal

MS (Indiana, Bloomington, USA), MA (Johns Hopkins, USA), PhD (Karachi)
Professor and Ex-Chairman, Department of Mathematics, University of Karachi
Convener, National Curriculum Revision Committee for Mathematics,
Higher Education Commission
Prepared BS, MS and PhD (mathematics) schemes of studies
Member, Expert Panel (Mathematics), National Curriculum Council,
Ministry of Education, Government of Pakistan
Reviewed mathematics curricula and textbooks for Classes I-XII
Former Head, Mathematics and Physics, Karachi Grammar School
Former Head, Mathematics and Physics, the Lyceum School (Clifton)
Reviewed A-level science curriculum for CERD

Homepage
e-mail

<http://ngds-ku.org/kamal>
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- Previous Trainings Conducted**
- Six-Day-In-Service-Training Course (Mathematics for College Teachers)*
HEC Regional Office, Karachi, August 16-21, 2004 (Course Coördinator)
- Correction Strategies at the Intermediate Level*
Commecs Educational Trust, Karachi, April 17, 2004
(resource person for the module)
- FDP Intensive Workshop*
Commecs Institute of Business and Emerging Sciences, Karachi, 1999
(Subject Expert in Mathematics)
- Science Teachers' Training*
The International School, Clifton, Karachi, 1997 (Master Trainer)
- Selected Talks**
- BS, MS and PhD Schemes of Studies Prepared by NCRC (HEC)*
Research Seminar, Department of Mathematics, University of Karachi, September 2, 2006
- How to Motivate the Students to Learn?*
Seminar, the Aga Khan University, January 21, 1998
- The Making of a Physicist*
The Karachi Physics Society Seminar, FG Urdu Science College, Karachi, November 25, 1986
- Selected Books**
- Mathematics— Revised Curriculum (BS Scheme of Studies)*
Kamal SA, Convener, National Curriculum Revision Committee in Mathematics, Higher Education Commission, Islamabad, Pakistan, 2008 [Editor]
- National Curriculum for General Mathematics— Grades XI-XII*
Kamal SA, Member, Expert Panel, National Curriculum Council, Ministry of Education, Government of Pakistan, Islamabad, Pakistan, 2008 [National Advisory Committee]
- National Curriculum for General Mathematics— Grades IX-X*
Kamal SA, Member, Expert Panel, National Curriculum Council, Ministry of Education, Government of Pakistan, Islamabad, Pakistan, 2007 [National Advisory Committee]
- National Curriculum for Mathematics— Grades I-XII*
Kamal SA, Member, Expert Panel, National Curriculum Council, Ministry of Education, Government of Pakistan, Islamabad, Pakistan, 2006 [National Advisory Committee]
- Mathematics— Revised Curriculum (BS, MS and PhD Schemes of Studies)*
Kamal SA, Convener, National Curriculum Revision Committee in Mathematics, Higher Education Commission, Islamabad, Pakistan, 2005 [Editor]
- Selected Papers**
- The Integrated Educational System: A Pre-University Educational System for the Third Millennium*
Kamal SA, the Sindh Educational Conference, the Jamia Millia Government College of Education, Karachi, Pakistan, 2009 (keynote lecture)
- From Mathematics to Technology: A Bridge Through Physics and Engineering*
Kamal SA, the International Conference on Physics and the World of Today, Department of Physics, University of Karachi, Karachi, Pakistan, 2008, p 32 (invited paper)
- The Training of a Physicist: From Concept Building to Problem- Solving Skills (Concluding Talk + Recommendations of Conference)*
Kamal SA, the Second International Conference on Physics Education, Center of Physics Education, National Center for Physics & Department of Physics, University of Karachi, 2003
- How to Develop Creative Thinking and Critical Analysis?*
Kamal SA, Siddiqui KA, Proceedings of the Second Workshop on Teaching of Physics, Edited by Hasnain AF, Karachi, Pakistan, 1986, pp 51-56