SYLLABUS OF

Ph.D. (EDUCATION)

(YEAR 2011 – 2012)

DEPARTMENT OF EDUCATION AND TRAINING

SCHOOL OF EDUCATION AND TRAINING

MAULANA AZAD NATIONAL URDU UNIVERSITY

GACHIBOWLI

HYDERABAD

Ph.D. (Education)

COURSE CONTENTS

Compulsory Paper

Paper – I : *Research Methodology*

Paper – II : *Optional – I (Any one of the following):*

1. Science Education
2. Social Science Education
3. Language Education
4. Teacher Education
5. Mathematics Education
6. Educational Technology

Paper – III : *Optional – II (Anyone of the following):*

1. Special Education
2. Environmental Education
3. Distance Education
4. Educational Administration
5. Educational Evaluation
6. Guidance and Couselling

Paper – I Research Methodology

OBJECTIVES:

1. To acquaint the research scholars with the nature, scope and limitations of various methods of conducing educational research.

2. To develop and understanding of process of conducting educational research.

3. To develop an ability of appropriate selection, development and use for various tools of research.

4. To acquaint the students with various techniques of sampling and to develop an ability of selecting appropriate sample for a research study.

5. To acquaint the students with various experimental design.

6. To acquaint the students with the use of various parametric and non-parametric statistics for analyzing quantitative data.

7. To develop an understanding of various techniques of analyzing qualitative data.

I. Research Methods: Experimental & Ex-post facto
Survey: Normative, co-relational, Evaluative,
Ethnographic Ethno methodological Grounded Theory,
Historical, Philosophical

II. Sampling Techniques: Sampling & Non-Sampling errors
Selecting Representative Sample
Probability & Non-Probability Techniques

III. Tools & Techniques of Research:

i.) Observation & Observation schedule
Various techniques for preparing, observation schedule

ii.) Soniometry: Soniometry Matrix & Sociogram.

iii.) Psychological Tests & Inventories: Selection and Development: Intelligence, Interest & Attitude, Achievement & Attitude, Adjustment

iv.) Questionnaire & Interviews & Writing Field Notice

IV. Experimental Design: Simple Randomized
Treatment X Subject
Treatment X Level
Factorial

V. Quantitative Data Analysis

- Review of Bivariate Regression & Correlational Analysis
- Multivariate Correlational & Regression Analysis
- ANOVA & ANCOVA Two way Analysis
- Factor Analysis

VI. Analysis & Interpretation of Qualitative Data. Inductive, Logical Analysis, Content Analysis.

VII. Use of Computer for Analysis of Qualitative & Quantitative Data.

Essential / Suggested Reading:

1. Cohen, L. Manion & Morrison K. Research Methods in Educaiton 6th Edn. New York. Rontledge – 2006.

2. Creswell, John W Research Design: Qualitative Quantitative and Mixed Methods Approacher 3rd Edn. New Delhi, Sage Pub. 2008.

3. Denzin N.K. & Lincoln Y.S. Handbook of Qualitative Research Sage Pub 2009.

4. Festinger U and Katz D (Eds) Research Methods in Behavioural Sciences New York: Mott, Reinehart and Winston Inc. 1970.

5. Filstead W.J. Qualitative Methodology: First hand Involvement with Social World. Chincago, Markhan Pub. Co. 1970.

6. Patton, M.Q. Qualitative Methods, Beverly Hills, Saga Pub. 1988.

7. Cochran, W.G. & Cochran G.M. Experimental Design Bombay, Asia Pub. House 1961 .

8. Guil for J.P. & Fruchtger B. Fundamental Statistics in Psychology and Education Mc Graw Hill. 1978.

9. Lindquist E.F. Designs and Analysis of Experiments in Psychology and Education Bostion; Houghton Miffin.

10. Ferguson G.A. Statistical Analysis in Psychology and Educations Tokyo, Mc Graw Hill 1981.

Paper II -1 : Science Education

Objectives of the Course

1. To enable students understand the nature and structure of Science.
2. To introduce students the Philosophy and History of Science.
3. To acquaint students with development of Science Education in India.
4. To help students understand the development of thinking in children and its implications of curriculum.
5. To enable students understand science as a tool for development as well as for protection of Natural Environment.

Unit I
Nature and Structure of Science.

a) Nature of Scientific knowledge

b) Processes of Science.

Unit II
History of Science

a) Development of Science as a discipline

b) Mile Stones in the development of Science.

c) Science, Society and Technology

d) Methods of Science.

Unit III
Scientific Thinking

a) Process of Cognitive Development in Children.

b) Development of Concepts and Principles in Science.

c) Creativity and its development.

d) Development of Scientific Attitude.

Paper II -2 : Social Science Education

OBJECTIVES

To enable the students to:

1. Understand the Etymology of Social Science
2. Become aware of integrated approach in Social Science
3. Know the latest environmental trends and issued in Social Science
4. Know methods of research in field of Social Science.

Unit – I ETYMOLOGY of Social Science.

- Social Science Curriculum and Development Issues
- Utility of Social Science as a Discipline.

Unit – II – Social Sciences as a Carrier of Human Values

- Pedagogy of Integrated approaches in Social Scineces
- Pedagogical use of ICT for Social Science

Unit – II Latest Trends and Issues in Social Science

- Building Sensitivity in the individuals regarding Environmental Issues – (Both Physical & Social)
- Peace Education – Issues related to Social Sciences
- Education for disadvantaged group

Unit – IV Evaluation

- Continuous and Comprehensive Evaluation in Social Science.
- Suggested Procedures and Practices of Evaluation in Social Science.

Unit – V Research in Social Science.

- Comparison between Qualitative & Quantitative Research
- Importance of SPSS
- Popular Methods used in Researches in Social Science.

BIBLIOGRAPHY (SOCIAL SCIENCE EDUCATION)

1	Westey E.B.	Teaching of Social Studies in High Schools D.C. Health and Co. Boster -1950
2	High . J.	Teaching Secondary School Social Studies, New York, John Wiley and Sons, 1962
3.	Jarokinick. J.	Social Studies in Elementary Education, New York, The Mocmillan Company -1959.
4	Matorella, Peter. H	Social Studies Strategies- Theory and Practice – New York, Harper and Row Publisher, 1976
5	Hassm K.B. & Harry, OP	Preparation and use of Audio Visual Aids- Englewood Cliffs, N.J. Prentice – Hall – 1955
6	Kochhar, S.K.	Innovations in Instructional Technology, Chandigarh, University Textbook Board, Punjab – 1975
7	Mittal H.C. And Chandna	R.N. Teaching of Social Studies, Dhanpat Rai and Sons, Jallundhar.
8	Sharma, R.L. and Verma	R.S. – Teaching of Social Studies – Vinod Pustak Mandir, Agra – 2001
9	Verma G.S	Samajik Vigyan – International Publishing House, Meerut – 200
10	Sharma R.A.	Environmental Education Vinod Pustak Mandir
11	Sharma R.A.	Paryawgvan Shiksha, Vinod Pustak Mandir Agra
12	Dubey	Samajik Vigyan Shiksha, Vinod Pustak Mandir, Agra
13	Mathus. S.S.	A Sociological Approach to Indian Education
14	Ruhela S.P. and Khan	R.S. – Samajik Vigyan Shikshan – Oota Open University
15	Koccha S.K. – 1963	The Teaching of Social Studies, Delhi University – Publishers.

16	Shaida B.D. & Shanda A.K.(1956)	Samajik Adhyan Shikshan, New Delhi Agra Book Depot.
17	Tyagi G. (1973)	Samajik Adhyan ka Shikshan – Agra – Vinod Pustak Bhandar.
18	Khan. S.U. (1998)	History Teaching Problem Perspective and Prospect – Heera Publications. New Delhi
19	Vashist S.R.	Social Sciences in Elementary Schools.
20	Dhanija Neelam (1993)	Multimedia Approaches in Teaching Social Studies, New Delhi Harmer Publishing House.
21	Mouley D.S.,	Rajput Sarla and Verma P.S. (1990) Nagrik Shastra Shikshan – Kota Open University
22	Michaelis. J.V.	Social Studies for Children in a Democracy New York (1966)
23	Ferrion Edwin	Teaching the New Social Studies, New York (1966)
24	Ruhela S.P.	Shiksha Ka Samajshashtra, UP Hindi Granth Academy.
25	Srinivas, M.N.	Social Change in Modern India, Bombay, Allied Publisher 1966

Paper II (3) LANGUAGE EVALUATION

OBJECTIVES:-

1. To acquaint the students with the structure, function and socio-psycho linguistics Theories of Languages.
2. To make the students aware of communicative approach to language teaching.
3. To develop appreciation of multilingual approach to language teaching learning.
4. To make the students aware of research methodology in langue teaching and to acquaint them with the techniques of implementing research out course in the field of language education.
5. To evaluate the contribution of different institutions and other formal agencies of language learning.
6. To make them aware of language policies and legislations.
7. Innovative experiments in language teaching learning.

Unit – I Structure and theories of Language

Language Structure: Phonology, Morphology, Syntax and Semantics. And its family classical vs Moslem Language. Theories of language learning-Sociologies tic and Psychololinguistic. Communication approach to language teaching, comprehensive literature.

Unit – II Language Policies and Legislatives

Language Policy and there lingual formula mother tongue, other language and Foreign language. Multilingualism and School Education Provision Learning in Government Schools and Private Schools. Recommendations of different commissions and committees regarding language learning.

Unit – III Tools of Research in Language Teaching:

Observation, interview, Questionnaire, Opinionnaire, Interest, Intentness, Attitude Scale, aptitude test, contents Analysis. Data Collection, Organization of Census and Sample Data.

Unit - IV Formal Agencies of Language Learning

Contribution of NCERT, SCERT and National Councils to Language Teaching – Learning Research Centre and Language Labs.

Unit – V New Trends in Language Teaching – Learning

Language Curriculum and Pedagogical Practice, Creativity and its Development, Text Book, its construction and Evaluation. Audio Visual. Aids in language learning. (Electronic Media Vs. Print Media and Language Learning).

Paper – II Teacher Education

Course Objectives

1. To map teacher education in pre and post independent India
2. To acquaint students with international TE Programmes
3. To acquaint students on TE Policies in India
4. To acquaint students of frame works for TE for the future
5. To acquaint students on innovative TE Programme

Unit – I Origins and history of Teacher Education in India

Normal Schools

Nai Taleem

Unit – II Teacher Education in Post-Independent India

Chattopadhyay Committee – 1980

Acharya Ramamoorthy Committee – 1990

NCF – 2005 on Teacher Education

NCTE – National Curriculum Frame Work for TE – 2010

Unit – III Teacher Education Programs

Comparative Study of

Pre-Service: Basic Education, B.Ed. ETE, and B.El.Ed. Montessori, NTT

Inservice: INSET (SSA), EKlavya, ABL, MGML, TE in Private Schools

Unit – IV Teacher Education: Case Studies of International Perspectives and Programs

Study of any one TE Programme of UK, USA, China

Unit – V Towards a Frame Work for Teacher Education

- Personal Development and agency of Teacher
- Continued professional Development of Teachers
- Standards in Teacher Education
- Networks for Teacher Education.

Detailed References related to the following will be included:

- Teacher Education sections of :
- Normal Schools
- Woods Despatch
- The Teacher and Society, Chattopadhyaya Committee Report (1983-95), MHRD, GOI. PP. 48
- Ramamoorthy committee
- Teacher Education for curriculum renewal vol 2.4, NCF, 2005
- NCFTE, 2010

Paper – II Mathematics Education

Objective of Course

1. To enable students understand the Nature and Structure of Mathematics
2. To introduce students the Philosophy and History of Mathematics
3. To acquaint students with the Development of Mathematics Education in India.
4. To help students understand the development of thinking in children and its implications for curriculum.
5. To enable students understand Mathematics as a look for development of an individual as well of society.

Unit –I Nature and Structure of Mathematics

i) Nature of Mathematics knowledge.

ii) Process of Mathematics

Unit – II History of Mathematics

i) Development of Mathematics as a discipline

ii) Mile Stones in the development of Mathematics

iii) Mathematics, Society and Technology

Unit – III Mathematics Thinking

i) Process of Cognitive Development in Children.

ii) Development of Concepts and Principles in Mathematics

Unit – IV Mathematics Education

i) Aims of Mathematics Education, Bloom's Texonomy, RCEM Approach

ii) Development of Mathematics Education in India.

iii) Mathematics Curriculum and Pedagogical Practices.

iv) Innovation experiments in Mathematics Curriculum.

Unit – V Mathematics and Society

i) Impact of Mathematics on Material Development of Society

ii) Impact of Mathematics and Technology on Social Development of Society.

Unit – VI Research in Mathematics Education

i) Current Trend of Research in Mathematics Education

ii) Areas of Research in Mathematics Education.

a) Areas creational and newly explored require researcher's alteration.

iii) Need of research in Mathematics Education.

REFERENCES

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2. Ausubel, D.P. (1968) Educational Psychology, a cognitive view, New York: Holt, Rinehart and Winston.

3. Baur, G.R. and George, L.U, Helping Children Learn Mathematics – A competency Based Laboratory Approach, California: Cummings Publishing Co., 1976.

4. Bloom, B.S. (ed.) Taxonomy of Education objectives David McKay: New York, 1956.

5. Bruce a Joyce (1994) Models of Teaching, New Delhi, March Weil Prentice Hall

6. David Wood (1988), How Children Think and Learn, Blackwell Publishers Ltd., Oxford U.K.

7. Davis, D.R. (1951) The Teaching of Mathematics, Addison Wesley Press. London.

8. Ernest, P. (1991)The Philosophy of Mathematics Education, London: Falmer Press.

9. Ernest, P. (1998) Social Constructivism as a philosophy of Mathematics, Albany, New York: SUNY Press.

10. Ernest, P. (1994a) Constructing Mathematical Knowledge: Epistemology and Mathematics Education, London, The Falmer Press.

11. Earnest, P. Ed. (1994b) Mathematics, Education and philosophy: An international Perspective, London: The Falmer Press.

12. Fatima, Roohi. Teaching Aids in Mathematics, Kanishka Publishers, Distributors New Delhi – 110002.

13. Fexmont & Herbert, How to Teach Mathematics in Secondary School, W.B. Sarurders Company, London.

14. Gage, N.L. (1989) The Paradigm Wars and Their Aftermath: A 'Historical' Sketch of Research on Teaching Sine 1989, Teachers College Record, Vol. 91, No. 2:135-150.

15. Glasersfeld, E. Von (1983) 'Learning as a constructive Activity', in Bergeron, J. and Herscovics, N. Eds(1983) Proceedings of the 5th PME-NA Conference, Montreal: University of Montreal, Vol. 1: 41-69.

16. Glasersfeld, E. Von (1995) *Radical Constructivism: A way of Knowing and learning*, London: Falmer Press.

17. Gronlund, N.E., Measurement and Evaluation in Teaching, New York: Macmillan, 1990.

18. Heimer, R.T. and True blood, C.R., Strategies for Teaching Children Mathematics, Chichago: Science Research Associates, 1977.

19. Howson, A.G. (1982) A history of Mathematics Education in England, Cambridge: Cambridge University Press.

20. Kilpartrick, J and Sierpinska A., Eds. (1998) Mathematics Education as a Research Domain, Dordrecht: Kluwer.

21. James. Anice, Teaching of Mathematics, Neelkamal Publication Pvt. Ltd. Hyderabad.

22. Kidd, Kennenth, P.et.al., the Laboratory Approach to Mathematics Chicago: Science Research Associates, 1970.

23. National Curriculum Framework 2005(NCF-2005) – A paradigm shift Mathematics (2005), NCERT Publications, New Delhi.

24. Ramsden, P. Using aims and objectives Research working paper, 89.4. Melbourne: Centre the study of Higher Education, University of Melbourne, 1989.

25. REsinck, L.B. and Ford, W.W., The Psychology of Mathematics for Instruction, New Jersey: Lawrence Eribaurn Associates, 1980.

26. Schonnel F.J. (1965) Diagonostic and Remedial Teaching in Arithmatic, Liver and Boyd, London.

27. Skemp, R.R., The Psychology of Learning Mathematics, Hatmondsworth: Penguin Books, 1971.

28. Sunitha E; Sambasiva Rao R and Bhaskara Rao Digumarti; Mehtods of Teaching Mathematics (2006); Discovery Publishing House; New Delhi.

29. Ward, M. and Hardgrove, C.E., Modern elementary Mathematics Reading, Massachusetts: Addison Wesely Publishing Co. Inc., 1965.

30. Yixin Zhang; "An Experiment on Mathematics Pedagogy: Traditional Method vs Computer Assisted Instruction" (2000);McNeese State University Lake Charles, U.S.A.

Paper – II Educational Technology

OBJECTIVES:

After going through the course the student will be able.

1. To have an in depth understanding of Modern Communication Technology
2. To differentiate between different systems of learning
3. To have knowledge of theoretical considerations of programmed planning.

Content Outline

Unit – I : MODERN COMMUNICATION TECHNOLOGY IN EDUCATION MEANING, SCOPE AND CHOICE.

- Systems approach to instruction and instructional designs.
- Audio Visual Technology: Projected and non-Projected Aids.
- Individualzed instruction: Kellar Plan, PSI, CAI, CMI & PLM
- Advanced Techniques in Education: Multimedia, Interactive Video, Teleconferencing, Tele-Bridge, Tele-Text, Video- Text.

Unit – II : EDUCATIONAL TECHNOLOGY FOR FORMAL, INFORMAL AND NON FORMAL SYSTEMS IN LEARNING: CONCEPT AND SCOPE

- Role, Experience and applications of Educational Technology in School Education and Higher Education.
- Role, Experience and applications of Educational Technology in Special Groups: Special Education and Distance Education.
- Interpersonal Approach: IEC, Social Marketing Approach, Participatory Communication Approach.
- Media Approach: Development Communication approach, Development support Communication approach and Media Forum.

Unit – III : PROGRAMMED LEARNING: THEORETICAL CONSIDERATIONS

- Programmed Learning: Theoretical Considerations
- Types and Mechanics/Steps of programming
- Programmed Learning/Instruction: Some applications.
- Difference between PLM and other individualized instructional techniques: CAI, CMI, Keller Plan. Personalized system of instruction.

Unit IV: COMPUTER IN EDUCATION

- Methods of computer based instruction: tutorials, Drill and Practice and instructional packages.
- Development of computer based instructional packages
- Evaluation of computer based instructional packages.
- Computerized Test – Construction and administration.

Unit V: E- LEARNING

- Evolution of Education
- Generations of Distance Educational Technology
- Role of E- Learning
- E-Learning: Definition, Advantages, Characteristics
- Components of E- Learning: CBT, WBT and Virtual Classroom
- E- Learning Tools
- Learning Management Systems: Definition – components – LMS Vs LCMS.