**NATIONAL COLLEGE (AUTONOMOUS), TIRUCHIRAPALLI – 620 001.**

**M.PHIL PROGRAMME STRUCTURE**

Under Choice Base Credit System

(For Candidates Admitted from the academic year 2019 – 2020)

# ECONOMICS

| SEMESTER | COURSE | Title of the Paper | Hrs./week | Credits | Exam. Hrs. | Marks IA | Marks UE | Total |
|---|---|---|---|---|---|---|---|---|
| I | Course I M19EC1 | Research Methodology | 4 | 4 | 3 | 25 | 75 | 100 |
| | Course II M19EC2 | Statistical Techniques for Research | 4 | 4 | 3 | 25 | 75 | 100 |
| | Course III M19EC3 | Teaching and Learning Skills | 4 | 4 | 3 | 25 | 75 | 100 |
| | Course IV M19EC4 | Guide Paper | 4 | 4 | 3 | 25 | 75 | 100 |
| II | | Dissertation | -- | 8 | -- | -- | -- | 200 |
| Total | | | 16 | 24 | -- | -- | -- | 600 |

| QUESTION PAPER PATTERN | | |
|---|---|---|
| Section – A | 10 x2=20 | 10 questions (Theory Only) |
| Section – B | 5 x 5 = 25 | Five Questions Either or Type  (Theory or Problem) |
| Section – C | 3 x10=30 | 3 out of 5 – Open Choice – Essay/Problem  type |

# Course I – Research Methodology - M19EC1

**Module – I Research Methods**

Social Research – Nature, Scope, significance and limitations – Pure, Applied and Descriptive research- Scientific Method – Steps- Assumptions of Scientific method – objectivity in research – Basic categories in scientific methods – fact – concept – theory of Probability.

**Module – II Research Design**

Need and types of research design – Exploratory, Descriptive, Diagnostic and Experimental Design – Sampling Design: Probability Sampling: Simple Random, Systematic. Stratified and Multistage or Cluster Sampling, Non-Probability Sampling – Purposive, Judgement, Quota and convenience sampling – Case study method – Role of Review of Literature.

**Module – III Steps in Research**

Formulation of a Research Problems and selection – levels of Research Projects – Term papers and Assignments – Research Monograph – Dissertation and Thesis – Role of the Teacher Guide in Research Project – Criteria of a good research Problems.

**Module IV: Formulation of hypothesis and Pilot study**

Hypothesis – meaning sources – need and importance – forms – Characteristics of good hypothesis – pilot study – Need for pilot study – advantages of pilot study Pre – testing – meaning – significance of pre-testing – advantages of pre-testing.

**Module V: Documentary Sources of data & Report Writing**

Sources of Information:- Primary and Secondary data – Observation, Interview – Schedule and Questionnaire – Construction of a Good Questionnaire – Format of a Research Report – Footnotes and reference.

## Basic Reading List

1. Ghosh. B.N., Scientific Method and Social Research, New Delhi, Sterling Publishers,1982.
2. Goode and Hatt [1987], Methods in Social Research, London: McGraw Hill.
3. Kothari, C.R.,[2009], Research Methodology: Methods and Techniques, New Age International Publishers, New Delhi.
4. Pauline, V. Young., Scientific Social Surveys and Research, McGrawHill Inc.
5. Saravanavel P (2013), "Research Methodology", 23rd Edition, Kitab Mahal, Allahabas.
6. Shanmuga Sundaram, V.[1974], Papers on the Methodology of Research in Social Sciences, Chennai: University of Madras.
7. Wilkinson and Bhandarkar [1991], Methodology and Techniques of Social Research, Bombay: Himalaya.

# Course II:  STATISTICAL TECHNIQUES FOR RESEARCH - M19EC2

**MODULE  - I      STATISTICAL MEASURES**

Presentation of data: Tabulation - Diagrammatic and Graphical Representation  -  Averages: Arithmetic Mean, Median and Mode  -  Dispersion: Range, Standard Deviation and Co-efficient of Variation - Skewness: Pearsons's co-efficient of skewness – Lorenz curve and Ginni Coefficient.

**MODULE  - II    STATISTICAL METHODS**

Correlation and Regression: Simple, partial and Multiple correlations – Simple Linear and Non-linear regression – Multiple Linear  Regression (Three variables only) - Problems in Regression analysis: Auto-correlation, Heteroscedasticity, Multicollinearity and Errors in  variables – Qualitative response regression models: Logit,  Probit and Tobit models.

**MODULE  - III  STATISTICAL INFERENCE**

Testing of Hypothesis:  Testing population mean, testing difference between two means (Large Sample)  - Student 't' test: Assumptions and applications  -  Chi-Square:  test of goodness of fit and test of independence  -  Analysis of variance.

**MODULE  - IV   NON-PARAMETRIC TESTS**

Introduction –Advantages of non-parametric tests – The Sign test – The Mann-Whitney U test – One sample Runs test – The Kruskal-Wallis 'H' test- Spearman Rank correlation test – Limitations of Non-parametric tests.

**MODULE  - V  STATISTICAL PACKAGES**

Microsoft Excel and its uses in statistical applications - Diagnostic analysis of Regression (Two variable case) - Interpretation of Output of a multiple linear regression model  - SPSS, its features  - Modules /Tools in SPSS   - Introduction to Gretel: An Econometrics software  - Its  features, tools.

## REFERENCES:

1. Elhance D N (2000), Fundamentals of Statistics, Allahabad, Kitab Mahal.
2. Gupta S P (2014), Statistical Methods, Sultan Chand & Sons., New Delhi.
3. Salvatore, Dominic and Reagle, Derrick. (2005), Statistics and Econometrics, 2nd Edition,
   Tata-McGraw Hill, New Delhi. Chapter 9.
4. Gujarati, Damodar N., Porter, Dawn C., and Sangeetha Gunasekar., Basic Econometircs,
    5ed, McGraw Hill Special Indian Edition, 2012, Chapter 15.
5. Dhnasekaran, Dr.K., Computer Applications in Economics, Vrinda Publications (P) Ltd,
   Delhi, 2010. (Chapter 6).
 1.  George, Darren and Mallery, Paul., SPSS for Windows STEP BY STEP, Pearson 2013,
     Chapter 15.
 2.  www.surceforge.net (Gretl user's guide)

# COURSE – III – TEACHING AND LEARNING SKILLS-M19EC3

**Objectives:**

- Acquaint different parts of computer system and their functions.
- understand the operations and use of computers and common
- Accessories
- Develop skills of ICT and apply them in teaching learning context
- and Research
- appreciate the role of ICT in teaching, learning and Research
- acquire the knowledge of communication skill with special
- reference to its elements, types, development and styles
- understand the terms communication Technology and
- Computer mediated teaching and develop multimedia / e-content in
- Their respective subject
- Understand the communication process through the web
- acquire the knowledge of Instructional Technology and its
- Applications
- Develop different teaching skills for putting the content across to
- Targeted audience

## Unit I – Computer Application Skills

Information and Communication Technology (ICT):  Definition, Meaning, Features, Trends – Integration of ICT in teaching and learning – ICT applications: Using word processors, Spread sheets, power point slides in the class room ICT for Research: On-line journals, e-books, Courseware, Tutorials, Teaching reports, Theses and Dissertations  – ICT for Professional Development : Concept of professional development; Institutional efforts for competency building; individual learning for professional development using professional networks, OERs, technology for action research, etc.

## Unit II – Communication Skills

Communication : Definitions – Elements of Communication : Sender, Message, Channel, Receiver, Feedback and Noise –Types of Communication : Spoken and written : Non- verbal communication  - Intrapersonal, Interpersonal, Group and Mass communication- Barriers to communication : Mechanical, Physical, Linguistic & Cultural – Skills of communication : Listening, Speaking, Reading and writing – Methods of developing fluency in oral and written communication – style, Diction and Vocabulary – Classroom communication and dynamics.

## Unit III – Pedagogy

Instructional Technology: Definition, Objectives and Types – Difference between Teaching and Instruction – Lecture Technique: Steps, Planning of a Lecture, Delivery of a Lecture – Narration in tune with the nature of different disciplines – Lecture with power point presentation – Versatility of Lecture techniques – Demonstration: Characteristics, Principles, planning Implementation and Evaluation – Teaching – Learning Techniques: Team Teaching, Group discussion, Seminar, Workshop, Symposium and Panel Discussion.

## Unit IV – E-learning, Technology Integration and Academic Resources in India

Concept and types of e-learning (Synchronous and asynchronous instructional delivery and means), m-learning (mobile apps); blended learning; flipped learning; E-learning tools (like LMS; software's for word processing, making presentations, online editing, etc.); subject specific tools for e-learning; awareness of e-learning standards- concept of technology integration in teaching – learning processes; frameworks guiding technology integration (like TPACK; SAMR);  Technology Integration Matrix- Academic Resources in India; MOOC, NMEICT; NPTEL; e-pathshala; SWAYAM, SWAYAM Prabha, National Academic depository, National Digital Library; e-Sodh Sindhu; virtual labs; eYantra, Talk to a teacher, MOODLE, mobile apps, etc.

## Unit V – Skills of Teaching and Technology based assessment

Teaching skills : Definition, Meaning and Nature – Types of Teaching skills : Skill of Set Induction, Skill of Stimulus Variation, Skill of Explaining, Skill of Probing Questions, Skill of Black Board writing and Skill of Closure- Integration of Teaching Skills – Evaluation of Teaching Skills – Technology for Assessement: Concept of assessment and paradigm shift in assessement; role of technology in assessement 'for' learning; tools for self & peer assessment (recording devices; e-rubrics, etc.); online assessement (open source software's; e- portfolio; quiz makers; e-rubrics; survey tools); technology for assessement of collaborative learning like blogs, discussion forums; learning analytics.

**References :**
1. Bela Rani Sharma (2007), Curriculum Reforms and Teaching Methods, Sarup and sons, New Delhi.
2. Brandon Hall, E-learning, A research note by Namahn, found in: www.namahn.com/resources/.../note-e-learning.pdf, Rerieved on 05/0/2011
3. Don Skinner (2005), Teacher Training, Edinburgh University Press Ltd., Edinburgh
4. Information and Communication Technology in Education : A Curriculum for Schools and programmed of Teacher development, Jonathan Anderson and Tom Van Weart, UNESCO,2002.
5. Jereb, E.,& Smitek, B.(2006). Applying multimedia instruction in e-learning. Innovations in Education & Teaching International,43(1),15-27.
6. Kumar K.L. (2008) Educational Technology, New Age International Publishers, New Delhi.
7. Learning Management system: https://en.wikipedia.org/wiki/Learning management system, Retrieved on 05/01/2016
8. Mangal  S.K.(2002) Essential of Teaching –Learning and  Information Technology,  Tandon Publications, Ludhiana.
9. Michael D. and William (2000). Integrating Technology into Teaching And Learning : Concepts and Applications, Prentice Hall, New York
10. Pandey S.K. (2005) Teaching Communication, Commonwealth Publishers, New Delhi.
11. Ram Babu A. abd Dandapani S (2006) Microteaching (Vol. 1 & 2) Neelakamal Publications, Hyderabad.
12. Singh V.K.. and Sudarshan K.N. (1996) Computer Education, Discovery Publishing Company, New York.
13.  Sharma R.A. (2006) Fundamentals of Educational Technology, Surya Publications, Meerut
14.  Vanaja. M. and Rajasekar S. (2006) Computer Education, Neelkamal Publications, Hyderabad.