

## Post Graduate and Research Department of Economics

### M.Phil / PhD Programme in Economics

(With effect from 2019-20)

M. Phil/PhD programme in Economics emphasizes policy-focused, socially-relevant and empirically-rigorous applied research in economics, by giving emphasis on the thrust areas such as, Strong foundation in economic theory and recent developments, Pragmatic approach to development issues and problems of the Indian Economy, Development of analytical skills and critical thinking through capability building, Hands-on training in quantitative techniques, Professionalism onto life-long learning process through capacity building at competitive edge.

Course code	Title of the course	Credits	Max Marks
<b>I SEMESTER</b>			
MEC 6601	Economic Theory and Policy ( ETP )	6	120
MEC 6603	Research Methodology and Quantitative Techniques ( RMQT )	6	120
<b>II SEMESTER</b>			
MEC 6402	Computer Applications in Social Science Research ( CASSR )	4	120
MEC 6600	Dissertation Work	12	240

### **Programme Specific Outcomes (PSOs) for M.Phil/Ph.D Economics**

On completion of the programme, postgraduates will be able to

1. Develop critical and quantitative thinking skills specific to business and accounting.
2. Evaluate economic issues and public policy by using economic models or data analysis while identifying underlying assumptions of the model(s) and limitations
3. Demonstrate the ability to frame and solve problems in economics, using concepts such as optimization, equilibrium, and the incentives faced by economic agents. They should demonstrate an understanding of the theoretical tools used to solve economic problems
4. Ability to solve problems that have clear solutions and to address problems that do not have clear answers and explain conditions under which these solutions may be correct.
5. Understanding how to use empirical evidence to evaluate the validity of an economic argument, use statistical methodology, interpret statistical results and conduct appropriate statistical analysis of data.

6. Handling empirical tools used in the analysis of data, including statistics such as mean, variance, and correlation, and the graphical and descriptive representation of data
7. Analyze the ethical and social justice dimensions of market and policy outcomes
8. Communicate effectively in written, oral and graphical form about specific issues and to formulate well-organized written arguments that state assumptions and hypotheses supported by evidence.
9. Examine an economic position in terms of the accuracy of its representations of economic principles and concepts and the soundness of its use of those concepts and principles to make a claim about economics
10. Solve real-world economic problems effectively in the context of an industry or field of study, showing that they can identify and collect the appropriate economic data, analyze data in terms of costs and benefits, present economic data and solutions to problems in a way that is clear and accurate

### **Mapping of Courses with Programme Specific Outcomes (PSOs)**

Courses	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10
MEC 6601		X	X	X	X		X	X	X	X
MEC 6603	X	X	X	X	X	X		X	X	X
MEC 6402	X	X	X		X	X	X	X	X	X
MEC 6600		X	X	X	X	X	X	X	X	X

### **Mapping of PSOs with POs**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10
PSO 1	X	X	X	X		X	X	X	X	
PSO 2	X	X	X	X		X	X	X	X	X
PSO 3	X	X	X	X	X		X		X	X
PSO 4	X	X	X	X	X	X	X		X	
PSO 5	X	X	X	X			X	X	X	X
PSO 6	X	X	X	X			X	X	X	X
PSO 7	X	X	X	X			X	X	X	X

PSO 8	X	X	X	X		X	X	X	X	X
PSO 9	X	X	X	X			X	X	X	X
PSO 10	X	X	X	X			X	X	X	X

**MEC 6601      Economic Theory and Policy      6Hrs/6 Cr**

The course aims at rigorous recollection of the knowledge in economic theories and issues in the Indian economy so as to identify the areas of further research. The course covers the relevance of economic theories of both micro and macro and issues of development with a special focus on Indian economy.

At the end of the course, students will be able to

- i. Juxtapose inductive and deductive reasoning
- ii. Understand economics as behavioral science
- iii. Develop macroeconomic models and evaluating macroeconomic policies
- iv. Analyze economic performance in light of policy, strategy and planning
- v. Evolve exploratory and confirmatory approaches to economic analysis

**Unit I: Relevance:** contextual relevance and realism of economic theories – paradigm shift in the economic thinking – theories established on inductive reasoning – theory as source of hypothesis.

**Unit II: Reflection I :** Economy of reasoning versus economy of emotions ( Profit and non-profit motives) – rational choice of consumer-rational decision of entrepreneur-production functions- social cost benefit analysis – value based policy economics – cross impact analysis – economic and non-economic factors – game theoretic approach – market factors and second best – choice under uncertainty – exchange under uncertainty – production under uncertainty – asymmetric information and incomplete markets – coarse theorem.

**Unit III: Reflection II:** Macro economics – short run, medium run and long run – national income accounting – aggregate demand and aggregate supply in the long run – supply side economics – anatomy of inflation and unemployment – IS – LM frame work – behavioral economics, consumption investment and financial markets – open macro economy – international adjustment and interdependence – new macro economics – rational expectations – revolutions, new Keynesian models and new business cycle theory.

**Unit IV: Recollection :** Development policy – changing phases of Indian agriculture – problems of industrialization – industrial efficiency and factor productivity – service sector developments-

Labour welfare measures – informal sector – role of voluntary sector – black economy – dimensions of globalization – federal finance – centre-state relations

**Unit V: Review:** Areas and scope for further research in different branches of economics – delimiting exercises: extraction and expansions

**References:**

1. Koutsoyiannis, A., ( 1979 ), Modern micro economics, Macmillan , London
2. Alhuwalia,I.J. ( 1985 ), Industrial growth in India; Stagnation since the mid-sixties, sage publications, Delhi.
3. Palgrave’s dictionary of economics, ( 1988 ), ed. John Eatwell, et.al, Macmillan press
4. John B. Taylor, ( 1999 ), Economics, AITBS Publishers and Distributors, New Delhi.
5. Limited, International Encyclopedia of Social Sciences, (2000) ed. David L sills, Macmillan company and the free press, New York.
6. Edwin Mansfield, Gary Yohe, ( 2002 ), Microeconomics, W.W. Norton and Company, New York
7. Radhakrishna and Pretha, (2002), Indian economics Development, Sage Publications, New Delhi.
8. Pindyck, Roberts and Rubinfeld, Daniel L., (2003 ), Micro economics, Prentice Hall of India private Limited, New Delhi.
9. Dorn Bush, et.al. ( 2004 ), Macroeconomics, Tata-McGraw hill Publications, New Delhi
10. Roger A McCain, (2005), Game theory – arion-technical introduction, Thomson south-western, United States

	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>
<b>Bloom’s Taxonomy</b>	<b>CO1</b>	<b>CO2</b>	<b>CO3</b>	<b>CO4</b>	<b>CO5</b>
K1: Remembering					
K2: Understanding		<b>2</b>			
K3: Applying	<b>3</b>				
K4: Analyzing				<b>4</b>	
K5: Evaluating					<b>5</b>
K6: Creating			<b>6</b>		

**Mean: 4.0**

## **MEC 6603 Research Methodology and Quantitative Techniques 6Hr/6 Cr**

The objective is to comprehend the process of research, through exposure to scientific methods, techniques of enquiry and tools. This course includes various research methods, design of study, formulation of hypothesis and verification using different quantitative tools and report writing.

At the end of the course, students will be able to

- i. Comprehensive different approaches in research methodology
- ii. Design research methodology suited to economic problems under consideration
- iii. Identify appropriate data and validating data sources
- iv. Formulate econometric models for exploratory approach and confirmatory approach to economic analysis
- v. Prepare full-fledged research report with its all essentials

**Unit I: Methods of Research:** Nature of economic research – pure, applied and action research – fact finding and marketing research – utility of research – quality and ethics of research and problems encountered – case study method and census – survey method and sampling – types and uses – secondary and tertiary data based meta research – qualitative methods.

**Unit II: Techniques of Research:** Research design – components of research proposal and the format of research report – statement of problem and objectives – translating objectives into questions – formulation of questionnaire – opinionnaire and scaling technique – SWOT analysis – interview techniques – observation; systematic observation and participant observation, participatory rapid appraisal.

**Unit III: Tools of Research – I:** Characteristics of usable hypothesis – sources and functions of hypothesis – testing hypothesis – data interpretation methods – small sample test and large sample test – ANOVA – non parametric tests – common test  $X^2$ , F, t

**Unit IV: Tools of Research-II:** SLR & MLR models – violations of assumptions – distributed lag models, dummy variables – identification – simultaneous systems – data reductions – principal component analysis – factor analysis – discriminant analysis.-Data generating process – stationary and non-stationary – Dicky Filler Test – Augmented Dicky Filler Test – properties of time series – integration and co-integration – causality – Granger Causality – Sims test – lag length, selection and criteria – Error Correction models – Panel Data Models

**Unit V: Report Writing:** Hands on experience in writing assignments, term papers, articles for publication and presentation in seminar – footnote, citation, bibliography and related formalities.

### **References:**

1. Aigner, D.J. (1971) Econometrics, Prentice Hall Inc, Englewood Cliffs, New Jersey.

2. Jonston, J. ( 1972 ), Econometric methods, Mc-Graw Hill Book Company, New York
3. Kurien, C T, ( 1973 ) A guide to research in Economics, Sangam Books, Madras
4. Koutsoyiannis, A, (1973), Theory of Econometrics, Harper and Row Publishers, Inc, New York.
5. Wilkinson and Panarkar (1984) Methodology and Techniques of social reearch, Himalayan Publishers, Bombay.
6. Goode and Hatt, (1987) Methods in social: Research, Mc-Graw hill, London.
7. Enders.W ( 1995 ), Applied Econometrics Time Series, John Willey & sons INC, New York
8. Kalirajan (1995), Applied Econometrics, Oxford & I BH, New Delhi.
9. Sonachalam, K.S., ( 1999 ), Research Methodology, methods and techniques, Wiely Eastern Limited, New Delhi.
10. Thanulingam, N. (2000 ), Research Methodology, Himalayan Publishers, Bombay.
11. Patterson, Kerry ( 2002 ), An Introduction to Applied Econometrics: A Time Series Approach, Palgrave, New Delhi.
12. Dniel T. Seymour, ( 2004 ), Marketing Research-Quantitative methods, S, Chand and company, New Delhi.

	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>
<b>Bloom's Taxonomy</b>	<b>CO1</b>	<b>CO2</b>	<b>CO3</b>	<b>CO4</b>	<b>CO5</b>
K1: Remembering					
K2: Understanding					
K3: Applying					
K4: Analyzing			<b>4</b>		
K5: Evaluating	<b>5</b>				<b>5</b>
K6: Creating		<b>6</b>		<b>6</b>	

**Mean: 5.2**

**MEC 6402      Computer Applications in Social Science Research      4Hr/4 Cr**

It is aimed at providing an exposure to fundamentals of computer and advanced statistical packages. It will enable the scholar to acquire and use the skill imminently. This course throws light upon various operating systems, spread sheet analysis-statistical packages and their practical applications in social science research, word processing and power point presentations.

At the end of the course, students will be able to

- i. Familiarize hardware and software applications
- ii. Enable to use spreadsheet for data analysis
- iii. Make use of statistical software for data mining and processing
- iv. Build time series models for identifying and solving economic problems
- v. Prepare research report with all essential and presentations

**Unit I: Introduction to Operating systems:** Types, generation and classification of operating system – advantages and applications of operating system – languages and packages – hardware and software – input and output devices – storage and memory devices – system configuration – DOS and Windows – IT and computer applications – introductions to windows – features and components – customizing windows – accessories – control panel – windows explorer.

**Unit II: Spread sheet analysis:** Introduction to spreadsheet – basic skills for working with a spreadsheet – short cut menus – entering, editing and protecting worksheet- moving, copying and deleting cells and ranges – creating and working with formula & statistical tools – data base on Excel – graphic and charts.

**Unit III: Statistical packages for cross-section data analysis:** Data analysis – types and uses of specific packages like SPSS, LIMDEP, E-VIEWS, etc., - data mining – cross tabulation and its attributes – distribution and its characteristics – SLR models and MLR models – estimations and interpretation – data reduction – principal components and factor analysis

**Unit IV: Statistical Packages For Time Series Analysis:** Data generating process – stationary vs non-stationary – co-integration – bi-variate and multivariate – Designing frame work for causality – error correction modeling – application of SPSS, E-VIEWS and R

**Unit V: Word Processing and Presentations:** Introduction to MS-Office and Word Processing- starting MS word – formatting text and documents – customizing the work place – types of views and types of style – file managements tools – columns tables and graphs – mail merge – MS Power point basis, creating, presentation with graphs and multimedia – interacting with spread sheet/ data base application – desktop printing and its applications.

## References

1. Alan R Neibouer (1977), Microsoft word for windows 95, Tata Mc-Graw Hill publishing company New Delhi.
2. Hussian and Hussian, (1992), computers: Technology, application and social implications, prentice hall of India private Limited, New Delhi.
3. Marija J Norusis (1993), SPSS for windows base system, Users guide release 6.0, SPSS Inc., Chicago, Illinois.

4. Madani, G.M.K., (1994), Introduction to econometrics: Principles and application, Oxford and IBH Publishing Private Limited, New Delhi.
5. Andy Tathbone (1996), Windows 10 for dummies, comdex computer publishing, New Delhi.
6. Subramanian, N. (2000), Introduction to computers: Fundamentals of Computer science, Tata Mc-Graw Hill publishing company.
7. Vikas Gupta, ( 2002 ), Comdex Computer Course, Kit Dream Tec, New Delhi.
8. Rama Ramanathan (2003), Introductory Econometrics, Tata Mc-Graw Hill book company, New Delhi.
9. Paul McFedries (2016)-Teach Yourself VISUALLY Excel 2016 (Teach Yourself VISUALLY (Tech))

	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>
<b>Bloom's Taxonomy</b>	<b>CO1</b>	<b>CO2</b>	<b>CO3</b>	<b>CO4</b>	<b>CO5</b>
K1: Remembering					
K2: Understanding					
K3: Applying			<b>3</b>		
K4: Analyzing				<b>4</b>	
K5: Evaluating	<b>5</b>				<b>5</b>
K6: Creating		<b>6</b>			

**Mean: 4.6**

**MEC 6600**

**DESSERTATION**

**12Hr/12 Cr**

It is a sequential, mandatory and independent research work to be carried out by each student under the guidance and supervision of a faculty member. It is in partial fulfillment of the requirements of the M.Phil degree programme.

Each student is required to identify a policy-focused, socially relevant and empirically-rigorous research issue of his own interest and present the project proposal by the end of the first semester. The dissertation work will be completed by the end of the second semester. In this semester, the student has to present a work-in-progress seminar focusing on the theoretical framework based on the review of literature and research design during the 4<sup>th</sup> week of the second semester. Subsequently, required data are to be collected systematically and analyzed



scientifically using various of mathematical, statistical and econometric tools. The findings of the analysis should be documented and along with suggestions and policy recommendations, if any, it should be submitted as a dissertation by the end of second semester.

At the end of the course, students will be able to

- i. Develop the skill of identifying issues of social relevance and national importance
- ii. Formulate appropriate research design suited for the problem under study
- iii. Design theoretical frame work for the research project
- iv. Apply relevant statistical tools in testing hypothesis
- v. Prepare an analytical report to be presented for public consumption.

### **Mode of Evaluation**

- The continuous to final evaluation will be in 1:1 in theory papers. There will be one test, one term paper and one seminar for each paper in the ratio 60:20:20 in the continuous assessment.
- For computer application course, the final examination for theory and practical is given 40:60 marks. The evaluation is completely internal for practical.
- For dissertation, the continuous to final assessment shall be 1:1 A research committee consisting of the PG Head as the Chairman and all the staff members who are guiding the students will monitor the process of the dissertation work.
- The guide and the chairman evaluate the continuous assessment of the progress of the student in two stages.
- The research proposal presented in the form of a defense seminar by the student at the end of the first semester is evaluated for 50 marks.
- The work in progress seminar presented during the 4<sup>th</sup> week of the second semester is evaluated for 50 marks.
- An external member nominated by the Research committee, the guide and the chairman of the research committee will evaluate the completed dissertation and conduct the Viva Voce. The Final Evaluation of the dissertation is done for 100 marks with the following breakup: Evaluation of the Dissertation 60 marks and the Viva Voce 40 marks.
- The maximum marks for each theory paper is 100 and the dissertation carries 200 marks. The passing minimum is 50 per cent in final examination and 50 per cent in aggregates.

	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>
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K6: Creating		<b>6</b>			<b>6</b>

**Mean: 4.8**