**Course description:** Master's Thesis requires the student to conduct meaningful and grounded research in economics with a focus on ecological, environmental and resource economics, the specialization of the MSc Economics program.

The first three semesters of M.Sc Economics program are designed in a way to provide skills and sound knowledge in basic economic theory and its practices. The foundations of the thesis are laid down in the core course titled -Methods of Research in Economics (MPE 176; third semester). It takes the students through the entire spectrum of research design that begins with theories, concepts, frameworks and models and ends with a Research Proposal for a Masters' Thesis (Assessment 3). Ordinarily, the student will write a Master's Thesis based on this Research Proposal, under the supervision of faculty/external experts, as decided by MPEC of MSc Economics programme (see, Additional Information).

**Course objectives:** To provide the student hands-on training in research in Economics that results in a structured output within a time frame

Course content								
Module	Topic	L	T	P				
1.	The research proposal including research plan submitted by the student as Assessment 3	0	0	600				
	of Methods of Research in Economics, and evaluated by faculty members shall							
	determine the requirements of the thesis, subject to approval by the assigned supervisor							
	and Masters Programme Executive Committee							

#### **Evaluation criteria:**

• Assessment 1 : Mid-term presentations (15%) to assess the mid-term progress on the thesis (evaluation sheet in Annexure 1)

Format of Presentation:

- (a) 15 minutes of presentation per student followed by 10 minutes of Q & A
- (b) Maximum 10 slides per presentation excluding title and references
- (c) Contents of the presentation must cover a recap of the proposed research question and methodology, progress regarding collection and analysis of data/theoretical modelling, as the case may be, and problem areas if any
- Assessment 2: Final presentations (25%) to assess the oral presentation of the final thesis (evaluation sheet in Annexure 2)

Format of Presentation:

- (a) 20 minutes of presentation per student followed by 10 minutes of Q & A
- (b) Maximum 15 slides per presentation excluding title and references
- (c) Contents of the presentation must cover a brief recap of the proposed research question and methodology, detailed results, interpretation and analysis, policy implications and further directions, if any.
- Assessment 3: Final Thesis (60%) to assess the written presentation of the final thesis (evaluation sheet in Annexure 3)

Students must submit two copies of the final thesis in electronic format only to the Office of the Head of the Department on or before the submission date announced by the Thesis Coordinator, incorporating the comments received in the course of their presentations. This should be accompanied by the scan of Thesis Submission form (Annexure 6). The Thesis must be submitted in the prescribed structure and format (Annexure 5).

Learning outcomes: At the end of this course, the student should be able to demonstrate the ability

- to conduct original and meaningful research in Economics (Tests 1-3)
- to deliver effective oral presentations of such research (Tests 1-2)
- to motivate, conceptualise, design and execute original research questions in the form of written output (Test 3)

Pedagogical approach: As required by the research question pursued in the Thesis.

#### **Course Reading Materials:**

- 1. Background material on research methods: The student may refer to MPE176 course material for specific references on research methods. The following books are suggested as ready reference:
- 1.John W Creswell and David J Creswell. 2018. Research Design: Qualitative, quantitative and Mixed methods approaches, New Delhi: Sage
- Mark Kanazawa. 2018. Research Methods for Environmental Studies. London and New York: Earthscan
- 2. Other material: As mandated by the topic of research, subject to approval from the supervisor

#### Additional information:

- 1. Thesis must be written *individually*.
- 2. A student who has obtained a letter grade of —C or higher in the course titled —Methods of Research in Economics (MPE 176) must continue with the topic and research plan submitted (Assessment 3 in it). A proposal to modify the topic or research plan must be accompanied by appropriate justification and consent from the supervisor assigned. It has to be placed before the Masters Thesis Coordinator who shall seek approval from the MPEC. The modified topic must reflect the overall focus and specialization of the program, i.e. Environment and Resource Economics.
- **3.** The MPEC of M.Sc Economics programme shall assign one of its members as (internal) supervisor. This will take place in the third semester after the presentation of the Research Concept Note (Assessment 1 in MPE 176) in consideration with the expertise of the faculty, the time that they can offer, and aiming at a balanced distribution of (Internal) supervisors. The MPEC may also assign a TERI SAS faculty member who is not a member of MPEC or even an individual from outside TERI SAS as an external supervisor. In such cases, an MPEC member will serve as the internal supervisor.

A student or a supervisor can request a change in the assignment of supervision to the Thesis Coordinator by making a request with justification. Consent of the student and both the supervisor(s) are necessary.

A student or a supervisor may request for having a co-supervisor. Consent of the student and both the supervisor(s) are necessary. All such requests must be sanctioned after approval of the MPEC. No such request can be considered after the mid-term presentations.

- **4.** Students are expected to spend a minimum of 40 hours per week on thesis work throughout the semester. Students are also expected to meet the supervisor (internal as well as external) at least once a fortnight to report on the progress made. The Thesis Coordinator will solicit the monthly confidential progress report from (both) the supervisors in an electronic form (Annexure 4).
- **5.** Plagiarism: <sup>1</sup> Students will be penalised for plagiarism offences, if any, in any of the submissions.
- **6.** Without valid reason and prior approval of the Dean (Academic), a student cannot postpone/change date of his/ her presentation(s) or submission(s) from the schedule announced by the Thesis Coordinator. Even in case of any emergency, a valid proof and an approval from the Dean is required.
- 7. The timeline for the Master's Thesis presentations and submissions will be notified by the Thesis Coordinator. The deadline for presentations and submissions, unless approved a priori by the Thesis Coordinator in special circumstances, are strict: all submissions must electronically reach the office of the Thesis Coordinator with a time stamp within 2359 hours of the due date. No late submission will be accepted and zero marks will be assigned to the

<sup>&</sup>lt;sup>1</sup> Plagiarism is defined as presenting someone else's work, including the work of other students, as one's own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered "common knowledge" may differ from programme to programme.

a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.

b. A student must give credit to the originality of others and acknowledge an indebtedness whenever:

<sup>1.</sup> Directly quoting another person's actual words, whether oral or written;

<sup>2.</sup> Using another person's ideas, opinions, or theories;

<sup>3.</sup> Paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;

<sup>4.</sup> Borrowing facts, statistics, or illustrative material; or

<sup>5.</sup> Offering materials assembled or collected by others in the form of projects or collections without acknowledgment.

<sup>[</sup>also see, https://portal.teriuniversity.ac.in/Rules/Plagiarism.pdf]

corresponding submission component.

- **8.** The Thesis Coordinator will set up the panel for evaluation of presentations. Weights will be as follows:
  - (a) For those with only Internal Supervisor—Supervisor(s)<sup>2</sup> and 1 faculty member (or an expert fromoutsideif any; weightage 60:40 respectively).
- (b) For those with Internal and External Supervisor/co-supervisor<sup>3</sup>, both the Supervisors; weightage 60:40 respectively.
- **9.** Evaluation of the Thesis will be as per the following process:
  - (a) only the Internal Supervisor (in case of absence of external supervisor or a co-supervisor), or,
  - (b) by both Internal and External Supervisor/Co-supervisor; weightage 60:40

Student responsibilities: Regular meetings with the supervisor

Prepared by: Nandan Nawn, Seema Sangita and Soumendu Sarkar

#### **Course reviewers:**

1. Vikram Dayal, Professor, Institute of Economic Growth, New Delhi

2. Anirban Dasgupta, Associate Professor, South Asian University, New Delhi

In case the supervisor(s) is not available due to unavoidable circumstances, a faculty member with expertise in the topic of research will examine the presentation.

<sup>&</sup>lt;sup>3</sup> In case the supervisor(s) is not available due to unavoidable circumstances, a faculty member with expertise in the topic of research will examine the presentation.

# Annexure 1: Master's Thesis Mid-term Presentation evaluation sheet

M.Sc. Economics Programme, Department of Policy Studies, TERI School of Advanced Studies

Name of Examiner			
Name of Student			
Name of Student			
Evaluation carried out as	Internal supervisor		External Supervisor /Examiner
Please fill each field in a way that research proposal and justification.  1. Introduction, Problem State	on for the allocated mar	ks.	roviding an impression on the quality of the
Relevance, Clarity, Innovativene	ess .		
2. Literature review  Coverage, Ability to review the r	relevant literature. Infe	rences of gap	s in the literature
	, <u>J</u>	701	
3. Method			
			ground, description and limitations of the g strategy and questionnaire (if relevant)
4. Expected findings			
Clarity on expected outcome			
5. Integration and Coherence			
Linkages between the introduction	on, problem statement,	research que.	stion, method, results, conclusion etc.
6. Clarity of Presentation			
	formation is presented i	n logical seq	uence; Good language skills and
pronunciation; Appropriate pace	e of presentation		
7. Quality of visual presentation			
Clarity; Organization and layou	t		
8. Responses during Q&A sess	sion		
Response to questions and comm	nents		
9. Additional comments/justi	fication, if any*		

# Suggested weights in total marks:

20% each on (a) method of analysis, (b) integration & coherence and (c) clarity of presentation 10% each on (d) introduction, (e) literature review, (f) expected findings,

10% in total on (g) quality of visual presentation and (h) responses during Q & A session.

Marks* :	(out o	of 100)						
Date				Signa	iture			
			Grad	le-marks lin	ıks			
Letter Grade**	A+	A	B+	В	C+	С	D+	D
Range of Marks	91-100	86-90	81-85	76-80	71-75	66-70	61-65	<= 60
* For marks award example, marks ab- marks below 66 ma ** See Grading Gu	ove 90 may ay be awar	y be awar	ded in work	s with a pote	ential for pu	blication in		
Grad	ding Guid	elines fro	m Student	Handbook	of TERI Sc	hool of Adv	anced Stud	ies <sup>4</sup>
A+/A  The thesis shows creativity and substantial effort. Significant and credible results have been obtained; or there is a logical explanation and analysis on what went wrong and suggestions for improvements.  The thesis is clearly written, including the technical aspects. Data is presented in an easy-to-understand format. Diagrams are clearly labelled. Grammar, typing, and spelling errors are absent.  The oral presentation is done in a professional and organized manner, describing the main highlights and contributions of the project.								
B+/B  The thesis shows good effort. Acceptable and credible results have been obtained; or there is an explanation of what went wrong.  The thesis is reasonably well written. The technical descriptions are accurate and complete, although there may be some ambiguities. Data is presented in an easy-to-understand format (tables and/or graphs). Diagrams are included. Most of the grammar, typing, and spelling errors have been corrected.  The oral presentation is done in a professional manner, describing the main highlights of the project.								
C+/C  The thesis shows reasonable effort, but produces limited results.  The thesis report is submitted but parts of it are not easy to understand. The technical descriptions may be inaccurate or incomplete. Some data or diagrams may be missing. The report includes grammar, typing, or spelling errors.  The oral presentation is done in a professional manner, but is difficult to follow or does not include significant details.								
<ul> <li>D</li> <li>☐ The thesis shows a lack of effort and produces poor results.</li> <li>☐ The thesis is submitted but is difficult to understand. The technical descriptions may be inaccurate or incomplete.</li> <li>Data or diagrams may be missing. The report includes numerous grammar, typing, or spelling errors.</li> <li>☐ The oral presentation is done in an unprofessional manner</li> </ul>								
F The thesis shows The thesis is not The oral present.	submitted	in full.			al manner.			

<sup>&</sup>lt;sup>4</sup> https://www.terisas.ac.in/pdf/student-handbook.pdf

# **Annexure 2: Master's Thesis Final Presentation Evaluation Sheet**

M.Sc. Economics Programme, Department of Policy Studies, TERI School of Advanced Studies

Name of Examiner			
Name of Student			
English at an analysis of the same	Internal supervisor		External Supervisor /Examinar
Evaluation carried out as	internal supervisor		External Supervisor /Examiner
Please fill each field in a way that research proposal and justification			ed providing an impression on the quality of the
1. Introduction, Problem Sta		Question	
Relevance, Clarity, Innovativene	ess		
2. Literature review			
Coverage, Ability to review the 1	relevant literature, Infe	ences of	gaps in the literature
3. Method	and a language	·	
			ackground, description and limitations of the ing strategy and questionnaire (if relevant)
, , ,			, , , , , , , , , , , , , , , , , , ,
4. Discussion of results			
Interpretation and implications	of results		
5. Integration and Coherence			
Linkages between the introduction	on, problem statement,	research	question, method, results, conclusion etc.
6. Clarity of Presentation			
	formation is presented i	n logical	sequence; Good language skills and
pronunciation; Appropriate pac			1
7. Quality of visual presentation			
Clarity; Organization and layou	t t		
8. Responses during Q&A sess			
Response to questions and comm	ienis		
9. Additional comments/justi	fication, if any*		

#### Suggested weights in total marks:

20% each on (a) method of analysis, (b) integration & coherence and (c) discussion of results 10% each on (d) introduction, (e) literature review, (f) clarity of presentation 10% in total on (g) quality of visual presentation and (h) responses during Q & A session.

Marks* :(out of 100)									
Date Signature									
			Grad	le-marks lir	ıks				
Letter Grade**	A+	A	B+	В	C+	С	D+	D	
Range of Marks	91-100	86-90	81-85	76-80	71-75	66-70	61-65	<= 60	
* For marks award example marks abo marks below 66 m ** See Grading Gu	ove 90 may ay be awar	be award	led in works	s with a pote	ntial for pub	lication in a			
A+/A  The thesis show logical explanation The thesis is cle Diagrams are clear The oral present	A+/A  The thesis shows creativity and substantial effort. Significant and credible results have been obtained; or there is a logical explanation and analysis on what went wrong and suggestions for improvements.  The thesis is clearly written, including the technical aspects. Data is presented in an easy-to-understand format. Diagrams are clearly labelled. Grammar, typing, and spelling errors are absent.  The oral presentation is done in a professional and organized manner, describing the main highlights and contributions of the project.								
what went wrong.  The thesis is reasome ambiguities.  Most of the gramn	The thesis shows good effort. Acceptable and credible results have been obtained; or there is an explanation of								
C+/C  The thesis shows reasonable effort, but produces limited results.  The thesis report is submitted but parts of it are not easy to understand. The technical descriptions may be inaccurate or incomplete. Some data or diagrams may be missing. The report includes grammar, typing, or spelling errors.  The oral presentation is done in a professional manner, but is difficult to follow or does not include significant details.									
D  The thesis shows a lack of effort and produces poor results.  The thesis is submitted but is difficult to understand. The technical descriptions may be inaccurate or incomplete.  Data or diagrams may be missing. The report includes numerous grammar, typing, or spelling errors.  The oral presentation is done in an unprofessional manner									
F  The thesis shows a lack of effort and produces poor results.  The thesis is not submitted in full.  The oral presentation is not done or done in an unprofessional manner.									

<sup>&</sup>lt;sup>5</sup> https://www.terisas.ac.in/pdf/student-handbook.pdf

# Annexure 3: Master's Thesis Final Thesis Evaluation Sheet

M.Sc. Economics Programme, Department of Policy Studies, TERI School of Advanced Studies

Name of Examiner	
Name of Student	
Evaluation carried out as	Internal supervisor   External Supervisor
Please provide comments below of criticism and suggestions for imp	on various attributes of the research ranging from appreciation, constructive rovement.
1. Abstract	
Comprehensiveness, Appropriate	e length
2. Introduction, problem states	ment and research question
Background information, Relevan	nce of problem statement; Innovativeness of the research question
3. Literature review	
Coverage; Ability to review the r	relevant literature; Inferences of gaps in the literature
4. Method	
Choice of method; Appropriatend method	ess of method; Comprehensive background, description and limitations of the
5. Results of the study and inte	erpretation
Interpretation of results; Discuss	sion and implications of results; Conclusion
6. Integration and coherence	
Linkages between the introduction	on, research question, method, findings and conclusion; Overall clarity
7. List of references	
Adequate use of references throu	gh-out the text; Link between list of references to text; Citation style, both in-
text and in reference	
	eraction and attending presentations
Regular interaction with supervis	sor (at least fortnightly updates by students in expected)
9. Additional comments/justific	cation, if any*

## Suggested weights in total marks:

30% on (a) results and its interpretation

10% each on (b) abstract, (c) introduction, (d) literature review, (e) method, (f) integration & coherence, (g) list of references and (h) regularity of the student in consulting you.

Marks* :(out of 100)									
Date Signature									
			Grad	le-marks lii	nks				
Letter Grade**	A+	A	B+	В	C+	С	D+	D	
Range of Marks	91-100	86-90	81-85	76-80	71-75	66-70	61-65	<= 60	
* For marks award example marks abo marks below 66 m ** See Grading Gu	ove 90 may ay be awar	be award	ded in works	s with a pote	ential for pub	olication in a			
☐ The thesis show logical explanation ☐ The thesis is cle Diagrams are clear	Grading Guidelines from Student Handbook of TERI School of Advanced Studies <sup>6</sup> A+/A  The thesis shows creativity and substantial effort. Significant and credible results have been obtained; or there is a logical explanation and analysis on what went wrong and suggestions for improvements.  The thesis is clearly written, including the technical aspects. Data is presented in an easy-to-understand format. Diagrams are clearly labelled. Grammar, typing, and spelling errors are absent.  The oral presentation is done in a professional and organized manner, describing the main highlights and contributions of the project.								
B+/B The thesis show what went wrong. The thesis is rea some ambiguities. Most of the gramn The oral present	sonably we Data is pre nar, typing,	ell written esented in and spell	n. The techni an easy-to- ling errors h	ical descript understand ave been co	ions are according to the format (table rrected.	urate and co es and/or gra	mplete, althaphs). Diagra	ough there may ams are include	
C+/C  The thesis show The thesis report inaccurate or incorerrors. The oral present details.	t is submit nplete. Sor	ted but pa ne data oi	arts of it are r diagrams n	not easy to nay be missi	understand. ing. The repo	ort includes	grammar, ty	rping, or spellin	
D The thesis show The thesis is sub Data or diagrams r The oral present	omitted but nay be mis	is difficu sing. The	lt to underst report inclu	and. The ted					

The thesis shows a lack of effort and produces poor results.
The thesis is not submitted in full.
The oral presentation is not done or done in an unprofession

The oral presentation is not done or done in an unprofessional manner.

F

<sup>&</sup>lt;sup>6</sup> https://www.terisas.ac.in/pdf/student-handbook.pdf

Annexure 4: Format for Submission of Confidential Progress Report (Master's Thesis) M.Sc Economics Programme, Department of Policy Studies, TERI School of Advanced Studies

### CONFIDENTIAL PROGRESS REPORT For / / to / /

Nan	Name of the Student:							
Title	e of the Research Topic:							
1	Status of the work							
2	List out the work related activities accomplished so far							
3	Future Work Plan and Time Line							
4	Comments from Supervisor (s)							
Date	e:							
[Sig	gnature of Student]	[Signature of Internal/External Supervisor]						

#### **Annexure 5: Structure of the Master's Thesis**

M.Sc. Economics Program, Department of Policy Studies, TERI School of Advanced Studies

The Contents of the Thesis should be in this order (may refer to the Thesis submitted earlier):

1	Title Page		
2	Declaration by the Student		
3	Certificate by the Supervisor and the Head of the Department		
4	Acknowledgment Page		
5	Table of Contents		
6	Abstract		Page numbering in
7	List of Tables (if any)		Roman, i.e., i, ii
8	List of Figures (if any)		
9	List of Symbols/Abbreviations (if any)		
10	Introduction		
11	Literature Review		
12	Method (including data if it is an empirical study)		
13	Analysis		
14	Conclusion		
15	References		
16	Annexures (if any) [Page numbering in Roman with A as	a prefix,	i.e. Ai, Aii,]

#### **Brief Details**

**Abstract:** This is a summary of the completed work, from Introduction to Conclusion, within 250 words. Broadly, it defined the area of study, states the objectives of the thesis, describes the study area and the methodology used, major findings, and their significance. Write this section after the rest of the work is complete.

**Introduction:** This describes the topic and the problem within 3-4 pages. Introduction must be brief and informative. It must describe the problem, its relevance and scope. The hypothesis must be clearly stated and a summary of research may be presented that places the problem in the context. The objectives and expected outcomes from the study must also be stated. All references need to be included in the references section.

**Literature Review:** The literature review must be a critical evaluation of existing work and explain the relevance of previous efforts and the gaps in research. The review should be more than just a collection of summaries of research papers. The reference sources will be textbooks, journals, and publications. Limit yourself to authentic sources. All references are to be reported in the references section.

**Data and Methodology:** A brief description of the data along with the summary statistics must be given. The student may choose a secondary source, or do a study by the questionnaire method. If the interview method is chosen, the sample details such as profile and size, and reasons behind such a choice may be described. It describes the methods and techniques of survey, analysis, etc. The method should be carefully formulated, identifying problems that may arise and possible solutions.

**Results and Analysis:** Explain and discuss the main results of the study, relating to the objective and hypotheses stated at the beginning. The results may be supplemented with brief tables and graphs. All the tables and figures should be self-contained, numbered and referred in the text. Avoid description of the tables and figures in the text; rather include the interpretation.

**Conclusion:** This section should be an assessment describing the gaps, limitations and scope for further research, based on the analysis that have been done to answer specific questions. Also sum up the main conclusions.

**Acknowledgments:** Acknowledge all the individuals and the agencies who have helped you in your work.

**Annexure:** This includes field data, questionnaire format, graphs, boxes and tables that could not be accommodated in the results section. All annexure should be referred in the main text.

#### General Formatting Instructions for the Master's Thesis

- 1. Please refer to thesis submitted in previous years for the color scheme of the cover and the binding requirements. Copies are available with the library.
- 2. The suggested format is as follows.
  - A page size of A4 (210 by 297 mm)
  - Left and right margins: 0.98 top and bottom: 11, justified, b.
  - One-and-a-half spacing c.
  - Times New Roman 12 point as the base font d.
  - Page numbers at the bottom of the page and at the centre e.
  - f. Printed on both sides; so, Gutter 0.5
  - i. Figures should be put on a separate page with no text in the back of that page; this page should be placed immediately after the text page where this figure was mentioned for the first time. Figures will not have page number.
- References should be in alphabetical order with no numbering or bullet points. 3.
- Tables should not have vertical grids. Horizontal grids should be highlighted at the top 2 lines, and 4. bottom line only.
- 5. Chapter heading should follow the following format:
  - All the main heading should be in UPPER CASE, BOLD and in the centre.
  - All sub-headings should be in the Title case, left justified and bold-italics. They should be (b) numbered.
- Allow a spacing of 3 lines (double the usual line spacing) before you begin a paragraph or section. 6.
- 7. Paragraphs and Sections within the subheading should not be numbered.

### **Format of the Title Page**

#### Title of the Master's Thesis

Master's Thesis

# Submitted by:

<Name of student>

In partial fulfillment for the Degree of M.Sc. (Economics)

#### Submitted to:

Department of Policy Studies TERI School of Advanced Studies Plot 10, Institutional Area, Vasant Kunj New Delhi-110070 India

Month Year

Annexure 6: Templates for Thesis Submission Form
M.Sc Economics Programme, Department of Policy Studies, TERI School of Advanced Studies

# Declaration to be made by the Student

This is to certify that the research that forms the b carried out by me and has not been submitted any	asis of this thesis titledwhere else for the award of any degree.	_is an original work
I certify that, to the best of my knowledge, all sour in the report.	rces of information and data have been full	y acknowledged
Name of the Student M.Sc. Economics TERI School of Advanced Studies		
Certificate for	or Supervisor(s) and the Head	
This is to certify that has carried out a Mas of M.Sc. Economics on the topicApril 2019).		
The report embodies the original work of the cand	lidate, to the best of our knowledge.	
Signature of Internal Supervisor Name and Designation Date	Signature of External Supervisor/Co-supe Name and Designation Organisation Address	rvisor
Signature of Thesis Coordinator Name and Designation	Signature of Head of Department Name	
Date	Date	