

INSTITUTE	FACULTY OF TECHNOLOGY
PROGRAM	MASTER OF TECHNOLOGY in ELECTRICAL ENGINEERING (Specialization in EV/PEED)
SEMESTER	4
COURSE TITLE	DISSERTATION PHASE-II
COURSE CODE	01EV1401/01PE1401
COURSE CREDITS	16

Objective:

- 1 The objective of a dissertation or thesis is to demonstrate a student ability to conduct independent research, apply critical thinking skills, and contribute new knowledge or insights to their field of study.

Course Outcomes: After completion of this course, student will be able to:

- 1 Critically evaluate the existing literature or domain related to the research topic.
- 2 Identify the limitations or gaps in the current body of knowledge within the literature or domain.
- 3 Apply a systematic approach to assess the scope and impact of the identified limitations on the research topic.
- 4 Acquire, Simulate, and Analyze relevant Data for Research Question.
- 5 Develop a novel methodology or approach of research topic.
- 6 Conduct an assessment of the novel methodology or approach utilizing established parameters and criteria.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	32	0	0	0	100	100

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
Total Hours		

Textbook :

- 1 Research Methods for Engineers, David Thiel, Cambridge University Press, 2014
- 2 Dissertation Writing for Engineers and Scientists,, Mark Breach, Prentice Hall, 2009
- 3 How to Design, Write, and Present a Successful Dissertation Proposal, Elizabeth A. Wentz,, SAGE Publishers, 2013

References:

- 1 Engineering Research Methodology, Engineering Research Methodology, Dipankar Deb, Springer, 2019

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
0.00	10.00	30.00	25.00	10.00	15.00

Instructional Method:

- 1 Research-Based Learning: It focuses on experiential learning through research. Students actively engage in the research process, taking ownership of their projects and developing essential skills in problem-solving, critical thinking, and data analysis.
- 2 Mentorship and Guidance: A supervisor or committee plays a crucial role in providing mentorship and guidance to the student. They will offer expertise, support, and constructive feedback, helping the student navigate the research process, refine research questions, and ensure scholarly rigor.
- 3 Self-Directed Learning: Students are encouraged to be self-directed learners, taking responsibility for their research and demonstrating autonomy in decision-making. They engage in independent literature review, identify research gaps, design methodologies, and make informed choices throughout the research journey.
- 4 Reflective Practice: The reflective practice enable students to reflect on their research progress, identify strengths and weaknesses, and make improvements. Regular self-reflection and evaluation will help students refine their research strategies and enhance the quality of their work.
- 5 Collaboration and Peer Learning: Opportunities for collaboration and peer learning are integrated into the pedagogy. Students can benefit from sharing ideas, discussing challenges, and receiving feedback from their peers, fostering a supportive and intellectually stimulating research community.
- 6 Continuous Feedback and Iterative Process: The pedagogy promotes a continuous feedback loop, where students receive feedback on their work at different stages of the research process. This iterative approach allows for refinement and improvement based on feedback received, enhancing the quality of the dissertation or thesis.

Instructional Method:

- 7 Ethical Conduct and Research Integrity: Students are expected to adhere to ethical guidelines and principles, ensuring the integrity of their research. The pedagogy emphasizes responsible conduct of research, including obtaining necessary approvals, maintaining confidentiality, and practicing academic integrity.
- 8 Effective Communication: Communication skills are emphasized throughout the pedagogy. Students learn to effectively communicate their research findings through written documents, oral presentations, and discussions. Clear and concise communication is essential to convey complex ideas and contribute to scholarly dialogue.
- 9 Time Management and Planning: It promotes effective time management and planning skills. Students learn to set realistic goals, establish timelines, and manage their research tasks efficiently, ensuring timely progress and completion of their dissertation or thesis.

Supplementary Resources:

- 1 <https://www.youtube.com/watch?v=D94hTcQaEds>