

INTRODUCTORY GUIDE FOR THE

**MASTER OF SCIENCE IN RENEWABLE
ENERGY ENGINEERING**

CONTENTS

Program Mission	3
Program Goals	3
Program Learning Outcomes.....	3
Knowledge and Understanding.....	3
Skills	3
Values, Autonomy, and Responsibility	3
Graduates Attributes	4

PROGRAM MISSION

To provide society with distinguished and professional engineers armed with engineering knowledge and engineering problem solving skill; Impart scientific research to achieve societal and sustainable development

PROGRAM GOALS

1. Preparing Graduates to be professional electrical engineers having developed superior technical competence and be actively engaged in lifelong learning.
2. Preparing Graduates to be Successful researchers, entrepreneurs, experts, and educators practicing high ethical and professional standards for the benefit of the community.
3. Supporting scientific research and creating a societal and sustainable impact.

PROGRAM LEARNING OUTCOMES

KNOWLEDGE AND UNDERSTANDING

K1 - an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

SKILLS

S1 - an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

S2 - an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

S3 - an ability to develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions

VALUES, AUTONOMY, AND RESPONSIBILITY

V1 - an ability to communicate effectively with a range of audiences

V2 - an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

V3 - an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

GRADUATES ATTRIBUTES

- Specialized knowledge
 - Possesses knowledge of principles, concepts, and theories, as well as cognitive and scientific skills, and applies them in their area of specialization.
- Critical thinking
 - Demonstrates an objective understanding of issues and theories in the field and their connection to other disciplines, with the ability to identify problems, review previous studies in the field, and collect and analyze data.
- Collaboration and communication
 - Possesses skills and the ability to communicate with others, both orally and in writing, to receive various types of information and convey ideas
- Information Technology Proficiency
 - Possesses the ability and knowledge to use digital tools.
- Innovation and entrepreneurship
 - Possesses leadership and initiative to stay updated with academic advancements, leveraging them for innovation, entrepreneurship, and creating a new business project that delivers added economic value.
- Scientific research
 - Has the ability to conduct rigorous scientific research and contribute to the academic enrichment of their field of specialization.
- Leadership and responsibility
 - Possesses the ability to lead, take responsibility, and collaborate with others in joint projects and initiatives, as well as contribute to community service.
- Initiative and adaptation
 - Possesses skills in adaptability, flexibility, and initiative.
- Accountability and occupational ethics
 - Demonstrates professional ethics, discipline, and self-accountability in the workplace
- Moderation and national identity

- Exhibits ethical, behavioral, and moderate intellectual qualities that serve the interests of their country
- Lifelong learning
 - Possesses the skill of continuous learning based on self-assessment of needs and keeping up with modern knowledge in their field of specialization
- Volunteering and social responsibility
 - Contributes to serving the community through the knowledge and skills they possess