MODULE DESCRIPTIONS

ELECTROMECHANIC TECHNOLOGY I

This module provides the fundamental underpinning of basic electrical and mechanical engineering knowledge and phenomenon. Electromechanics focuses on the interaction of electrical and mechanical systems as a whole and how the two systems interact with each other.

ENGINEERING MATHEMATICS I

This module introduces and strengthens fundamental mathematics knowledge to support basic science and discipline-specific engineering science modules in the curriculum and provide a foundation for further studies.

ENGINEERING PHYSICS I

This module will teach students the fundamental underpinning concepts and principles related to the mechanics, electricity and magnetism necessary to support basic discipline specific engineering-science modules.

ENGINEERING PROFESSIONAL SKILLS

This module provides the fundamental skills to harness the power of ICT to support engineering in various disciplines. The module aims to develop students who will use these skills consistently, fairly, and effectively while considering the framework of the South African engineering environment.

RENEWABLE DESIGN PROJECT

This module will provide the fundamental underpinning knowledge to wire, configure, test and integrate a renewable system application and will also introduce fundamental discipline specific engineering knowledge to support basic science modules in underpinning Renewable Project. An essential part of the project will be the extensive testing and recording of results. Performance analysis must be performed to demonstrate the effects of parameter changes, etc.

RENEWABLE SYSTEMS INSTALLATION PRACTICE

This module aims to provide a knowledge base of the electrical, mechanical and regulatory requirements for installing a renewable energy (RE) source.

SOLAR AND WIND ENERGY SYSTEMS

The purpose of this module is to provide a study into solar radiation and the application thereof in electrical systems as well as to provide a knowledge base PV and Wind energy design. The module covers a broad background knowledge base of the most important and prevalent solar technologies to aid in the understanding and interpretation of the maintenance and repair conditions of solar energy systems.

STORAGE AND GENERATION

This module aims to provide a knowledge base on the generation, transmission, and distribution of electricity, as well as the protection of electrical distribution systems and energy storage systems.