Engineering Department

Diploma I year level in Engineering

CODE	COURSE TITLE AND DESCRIPTION	CREDIT HOURS
ENTW1100	**Technical Writing I**: This course will teach, students basic academic writing skills to enable them to communicate effectively and clearly. They will learn to analyze required readings and discover ideas that they can use for writing assignments and projects.	3
ENTW1200	**Technical Writing II:** This course is a continuation of Technical Writing I. It aims at enabling the students to communicate effectively and appropriately in writing, based on real life situations. They will sue English for academic purpose and expository writing, as well as develop their writing skills in an integrated manner, making use of the listening, reading and speaking skills.	3
MATH1102	**PureMath**: The Pure Mathematics course is the second in the series of two courses designed to bridge the gap in mathematical skills between secondary school and higher education. This specific course prepares students who are going for engineering, science, and technology oriented specializations to learn and solve mathematical problems in English and enables them to meet the prescribed learning outcomes. It also prepares students to acquire necessary knowledge and skills for further studies in their specializations. Demonstrate understanding of the definition of a function and its graph., polynomial functions, exponential and logarithmic functions and solve problems arising from real life applications, inverse relationship between exponents and logarithms functions and use this relationship to solve related problems, the trigonometric functions and their inverses, an understanding of trigonometric identities, the law of sines and cosines to solve a triangle and real life problems, the conic sections and understand in particular the parabola, ellipse and hyperbola and construct their standard equations AND basic concepts of descriptive statistics, mean, median, and mode and summarize data into tables and simple graphs. **Course Pre-requisite- FPMT 0101 Basic Mathematics**	3
MATH1200	**Calculus I:** This course is to equip the student with the basic techniques of calculus to solve problems in engineering and other applied fields. This course will enable the student to, grasp the ideas of limits and continues functions, Conceive the concepts of derivatives, Learn how to find anti-derivatives, Understand the techniques of applying derivatives and anti-derivatives to solve problems in realistic situation. **The prerequisite for this course is PureMath (MATH1102).**	3
PHYS1100	**Physics 1 (Engineering)**: This course is a vital subject for engineers. This course introduces the basic concepts of Physics like measurements of physical quantities with their units, Mechanics, Circular motion, Oscillation, Gravitation, Electrostatics and Electrical circuits. These concepts will enable the students to understand the world around him; applications used in everyday life and relate the physics to other sciences and advancement of technology. **The prerequisite for this course is PureMath (MATH1102).**	3

PHYS1211	**Physics 2 (Engineering):** This course is a continuation of physics-I. This course deals about Magnetism, Electrostatics, Electromagnetic induction, Electromagnetic waves, Optics, Heat and Modern Physics. These concepts will enable the students to understand the world around him, applications used in everyday life and relate the physics to other sciences and advancement of technology. **The prerequisite for this course is Physics-I (PHYS1100).**	3
CHEM1100	**Fundamentals of Chemistry (Engineering):** This course introduce the students to the basic concepts of chemistry, especially aspects, which form an essential, background for those majoring in engineering. This course covers topics like chemical calculations, properties and reactions of acids and bases, structure of atom and redox reactions. This course enables the student to apply the laws of electrolysis and have a general understanding of the manufacture, composition of paints.	3
EEPW1240	**Engineering Workshop:** This course aims to equip the student with practical knowledge of elementary engineering tasks and provide them with progressive hands-on structured experience of environment and practices related to engineering. It also enables the students understanding of safety and its importance for the protection of personnel and equipment/machinery. It provides hands on experience on how to use various measuring tools, instruments, equipments/machinery available in mechanical, electrical and construction work shops.	3
CECE1100	**Engineering Graphics:** This course provides the students with the basic knowledge of engineering drawing which enables him/her to produce high quality engineering drawings. It consists of two parts namely Manual Drawing and Computer Aided Design. Manual drawing enables them to understand the concept of engineering drawing and how to produce technical drawing using drawing instruments. Computer aided drawing explores the use of drafting software like AutoCAD package to produce high quality technical drawing with full part details.	3
ITAD1100	**Advance IT Skills** This course aims to provide students with a breadth of IT Skills in applications that are useful for students from various non-IT fields of specialization. The course builds on the skills acquired in the IT foundation course to train students on important computer tools and software applications such as E-learning tools, desktop publishing applications, web applications, computer peripherals, statistical analysis packages, and database development and manipulation. Demonstrate their ability to use the e-learning portal and to manage network spaces. Design newsletters and brochures using a publishing software and design tools. Design and develop web applications using a web developing software. Connect, install and troubleshoot peripherals and other similar devices Use statistical analysis package to enter and analyze data. Develop and manipulate databases and create a front-end design for the database.	3
EECP1290	**Computer Programming for Engineering**: This course enables the students to understand different levels of computer programming languages. Students will be able to write and execute programs in C language for engineering problem solving. This course will also introduce UNIX operating system and it components.	3
BAMG 2111	**Entrepreneurship:** This course is to introduce the students to entrepreneurship phenomenon, and to expose them to the theory as well the experience associated with entrepreneurship. It also covers such area as financial management and planning, legal regulation, concepts and tools in developing new venture communication tools in small business.	3