



ENGINEERING DEPARTMENT
COURSE DESCRIPTION
DIPLOMA FIRST YEAR LEVEL

Couse Code	Course Title and Description	Credit Hours	Contact Hours Theory	Contact Hours Practical
ENTW 1100	Technical Writing I: This course ensures that the learner develops English Language skills to communicate at a level that meets the learner's needs in the various academic situations and the labour market.	3	4	-
ENTW 1200	Technical Writing II: This course is designed to improve student performance in writing and oral communication. The course covers research, preparation, outlining, delivery and evaluation.	3	4	-
MATH 1102	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	4	-
MATH 1200	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. Course pre-requisite -MATH1102 or MATH1104, Pure Maths or Pure Math (Foundation).	3	3	-



<p>PHYS 1100 and PHYS 1100P</p>	<p>Physics 1 (Engineering) Theory and Practical: 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 experiments done in Physics 1 (engineering) practical, help a student to reinforce the concepts studied in theory. Experiments are centered around study of various aspects of oscillations, electrical circuits, mechanics (including use of common measuring instruments like vernier calipers, screw gauge and multimeter). Course pre-requisite PureMath (MATH1102).</p>	<p>3</p>	<p>2</p>	<p>2</p>
<p>PHYS 1211 and PHYS 1211P</p>	<p>Physics 2 (Engineering) Theory and Practical: This course is a continuation of Physics-I. This course deals about Magnetism, Electromagnetism, Electromagnetic induction, Electromagnetic waves, Optics, Heat & Thermodynamics 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 experiments done in Physics 2 (engineering) practical help a student to reinforce the concepts studied in theory. Experiments are centered on study of various aspects of waves, optics, electrical circuits like study of RC circuit, heat and gas laws and study of cathode ray oscilloscope. Course pre-requisite -PHYS1100 Physics-I.</p>	<p>3</p>	<p>2</p>	<p>2</p>
<p>CHEM 1100 and CHEM 1100P</p>	<p>Fundamentals of Chemistry (Engineering): This course introduces 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, structure of atom and redox reactions. This course enables the student to apply the laws of electrolysis, basic concepts of chemical kinetics and organic chemistry. The experiments done in Fundamentals of chemistry practical, help a student to reinforce the concepts studied in theory. Experiments are centered on study of various aspects of chemical calculations, properties and reactions of acids and bases, redox reactions and salt analysis.</p>	<p>3</p>	<p>2</p>	<p>2</p>
<p>ECPW 1240</p>	<p>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.</p>	<p>3</p>	<p>-</p>	<p>6</p>



<p>CECE 1100</p>	<p>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.</p>	<p>3</p>	<p>-</p>	<p>6</p>
<p>ITAD 1100</p>	<p>Advanced IT Skills The course build on the skills acquired in the IT foundation course to train students on important computer tools and software applications such as desktop publishing, web applications, advanced spreadsheets, and databases. Throughout the semester, students will be actively utilizing the e-learning infrastructure of the college. Course pre-requisite -FPIT0001 IT for foundation.</p>	<p>3</p>	<p>-</p>	<p>4</p>
<p>EECP 1290</p>	<p>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. Course pre-requisite –ITAD1100 Advanced IT Skills.</p>	<p>3</p>	<p>2</p>	<p>2</p>
<p>BAMG 2111</p>	<p>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. Course pre-requisite –ENTW1200 Technical Writing-2.</p>	<p>3</p>	<p>2</p>	<p>2</p>