

**College of Computer Studies And Engineering
Lorma Colleges
City of San Fernando**

**Bachelor of Science in Computer Science
Course Description
SY 2011-2012**

FIRST YEAR

FIRST SEMESTER

COURSE NO: ALGEBRA

DESCRIPTIVE TITLE: College Algebra

PREREQUISITE: NONE

UNITS: 3

Course Description: A course involving the study of the real number line, algebraic operations and processes of elementary algebraic terms, and also those that involves exponents and radicals, linear equations, quadratic equations, system equations, and its applications, the binomial theorem, factoring fractions, progressions, ratio proportions and variations, the fundamental theorem of algebra, theory of equations, determinants, partial fractions permutations and combinations and complex numbers.

COURSE NO: BIBLE01

DESCRIPTIVE TITLE: Christian Foundation

PREREQUISITE: NONE

UNITS: 3

Course Description: This course is an introduction of the story of the Bible, the nature and being of God and the power of God's word in one's life with emphasis of the life, person and ministry of the Lord Jesus Christ. It also embraces biblical and Christian values that will inspire the students to live uprightly and to achieve excellent and honorable aspirations.

COURSE NO: COMFUND

DESCRIPTIVE TITLE: Computer Fundamentals

PREREQUISITE: NONE

UNITS: 3

Course Description: In this course the student is exposed to beginning instruction and practice in their skills in developing their skills in typing and learn the different DOS commands and equip them with the skills and knowledge to successfully use Microsoft Office such as MS Word, MS Excel, MS Power Point and simple database application.

COURSE NO: COMPRO1

DESCRIPTIVE TITLE: Computer Programming 1

PREREQUISITE: NONE

UNITS: 2/1

Course Description: Computer system, problem-solving procedures, algorithms and controls structures, data types, vectors, array and record and string manipulation. C programming concepts, variables, operators, and expressions statements, functions, array and pointer, structure, processor.

COURSE NO: FILIP11

DESCRIPTIVE TITLE: Sining ng Pakikipagtalastasan

PREREQUISITE: NONE

UNITS: 3

Course Description: Nilalayon ng kursong ito na maipakilala sa estudyante ang pangkalahatang saklaw ng pagtuto sa wika at komunikasyon. Nakabatay ang pananaw at prinsipyo ng kurso sa paghubog at paglinangng isang mulat na kamalayan, mula sa pag-unawa sa kalikasan ng wika at komunikasyon, hanggang sa paggamit sa mga kaalamang ito upang makabuo siya ng isang epektibong ugnayan sa kanyang kapwa at mapalawak ang kanyang pagkilalasa sarili at daigdig. Sa pamamagitan ng kursong ito, mamumulat ang estudyante na ang susi niya sa isang epektibo at dinamikong pakikipagkapwa ay nakasalalay sa kanyang masining na paglinang sa kanyang pakikinig, pagsasalita, pagbabasa, at pagsusulat.

COURSE NO: KYBOARD

DESCRIPTIVE TITLE: Keyboarding

PREREQUISITE: NONE

UNITS: 1

Course Description: This course covers operation of the computer keyboard and developing basic keyboarding techniques required to develop speed and accuracy on straight copy. Instruction will include the alphabetic keys, numeric keys, and special symbol keys, as well as basic word processing features, including creating and printing a document.

COURSE NO: MODCOM1

DESCRIPTIVE TITLE: Modern Communication 1

PREREQUISITE: NONE

UNITS: 3

Course Description: This course is designed to provide students with the necessary communicative skills in English. It is also focuses on the different parts of speech and sentence patterns. Furthermore, it includes reading selections as springboard for the teaching and development of grammatical concepts.

COURSE NO: NSTP001

DESCRIPTIVE TITLE: NSTP 1

PREREQUISITE: NONE

UNITS: 3

Course Description: The Civic Welfare Training Service (CWTS) is a component of the National Service Training Program (NSTP) is a course for first year students both males and females designed to help them understand, appreciate and eventually live by the basic concepts of the Student's Transformation and Enrichment for Truth (STET) with the end in view of empowering them into becoming a potent resource for community development.

COURSE NO: PHYSED1

DESCRIPTIVE TITLE: Physical Fitness

PREREQUISITE: NONE

UNITS: 2

Course Description: This course include a wide variety of activities that can be used for physical fitness purposes, providing the students the fundamental understanding the basic body mechanics of gymnastics, stunts and physical fitness exercises.

COURSE NO: PRODSOF

DESCRIPTIVE TITLE: Productivity Software

PREREQUISITE: NONE

UNITS: 2

Course Description: This course will train students in the use of popular productivity software tools such as word processors, spreadsheets, presentation/graphics, software, project management programs, accounting programs and the like.

FIRST YEAR

SECOND SEMESTER

COURSE NO: BIBLE02

DESCRIPTIVE TITLE: Christian Life and Ethics

PREREQUISITE: BIBLE01

UNITS: 3

Course Description: This course introduces the individual students in the development of dynamic Christian life and ethics that will gear to a potential and harmonious relationship with his God, his family, his community and his life.

COURSE NO: COMPRO2

DESCRIPTIVE TITLE: Computer Programming 2

PREREQUISITE: COMPRO1

UNITS: 2/1

Course Description: An introduction to the concepts of object oriented programming their semantics and implementation using C++. It also covers the programming methodology application development in C++.

COURSE NO: DATASTRU

COURSE TITLE: Data Structures

PREREQUISITE: COMPRO1

UNITS: 3

Course Description: This workshop provides an in-depth use of the ANSI C programming language. Guidelines on structured programming methodology and tips on coding style will be enumerated throughout the workshop. Emphasis will be placed upon use of advanced I/O routines, functions, pointer operations, dynamic data structure and memory allocation techniques. In the lab sessions, participants work through several hands-on exercises and develop small projects that reinforce the topics discussed.

COURSE NO: HARDSOF

DESCRIPTIVE TITLE: Hardware and Software Fundamentals

PREREQUISITE: COMFUND

UNITS: 2/1

Course Description: This subject presents an in-depth exposure to computer hardware and operating systems. Students learn the functionality of hardware and software components as well as suggested best practices in maintenance, and safety issues. Through hands on activities and labs, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. In addition, an introduction to networking is included.

COURSE NO: INTERNE

DESCRIPTIVE TITLE: Internet and Multimedia

PREREQUISITE: COMFUND

UNITS: 2/1

Course Description: Internet and Multimedia System is designed to study and use basic Internet technologies such as telnet, group communication tools, FTP, and the World Wide Web. And also utilizing other Internet applications such as email, newsgroups, and gopher for class projects and communication. Students will design and build their own web pages as part of a final project, incorporating basic HTML and multimedia types such as animation, audio and video. Students will also learn about the

various types of multimedia applications and how to construct effective interactive multimedia messages.

COURSE NO: MODCOM2

DESCRIPTIVE TITLE: Modern Communication 2

PREREQUISITE: Eng11

UNITS: 3

Course Description: This course is designed to provide students with the necessary communicative skills in English. It also focuses on the different parts of speech and sentence patterns. Furthermore, it includes reading selections as a springboard for the teaching and development of grammatical concepts.

COURSE NO: NSTP002

DESCRIPTIVE TITLE: NSTP 2

PREREQUISITE: NSTP01

UNITS: 3

Course Description: The Civic Welfare Training Service (CWTS) 2 is a sequel to CWTS 1. It is designed to immerse students in activities that will arm them with the capability to contribute to the uplift of the general welfare and the quality of life for the members of the community and the enhancement of its facilities especially those that are devoted to improving the health, environment, entrepreneurship, safety, recreation and morals of the citizens.

COURSE NO: PHYSED2

DESCRIPTIVE TITLE: Rhythmic Activities

PREREQUISITE: PE 1

UNITS: 2

Course Description: The emphasis of this course is on learning the fundamentals of the Philippine Folk Dances, Ballroom Dances and other types of dances.

COURSE NO: TRIGONO

DESCRIPTIVE TITLE: Trigonometry

PREREQUISITE: ALGEBRA

UNITS: 3

Course Description: This covers fundamental concepts of plane trigonometry and of plane analytic geometry. Trig functions, trig identities, solving triangles, analytic geometric proofs, conics, parametric equations.

SECOND YEAR

FIRST SEMESTER

COURSE NO: CALCULS

DESCRIPTIVE TITLE: Calculus

PREREQUISITE: TRIGONO

UNITS: 3

Course Description: The course begins with a treatment of the real number system, then reviews solving equations. Functions and their properties are covered next followed by related theorems. The lesson on the complex number system allows for a more in-depth discussion of mathematics. Also covered are identities, solving triangles and matrices. This course covers the methods of integration, and the study of the definite integral, with applications to problems in areas, volumes, surfaces, and lengths of arcs. A course covering the real number system as a complete, ordered field; topological properties of \mathbb{R} and \mathbb{R}^2 , limits and continuity.

COURSE NO: COLPHYS1

DESCRIPTIVE TITLE: College Physics 1

PREREQUISITE: ALGEBRA

UNITS: 2/1

Course Description: This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied

COURSE NO: COMPORG

DESCRIPTIVE TITLE: Computer Organization and Assembly Language

PREREQUISITE: 2/1

UNITS: HARDSOF

Course Description: This course is about the structure and function of computers. Discussion are geared toward a common understanding that the computers system or the computer in general, can be viewed as a structure of components and its function described in terms of the collective function on its co-operating components.

COURSE NO: COMPRO3

DESCRIPTIVE TITLE: Computer Programming 3

PREREQUISITE: COMPRO2

UNITS: 2/1

Course Description: This course covers principles of object-oriented design and programming. Topics include the role of objects, classes, methods, message passing, encapsulation, polymorphism, inheritance, and instantiation. Topics are illustrated using an object-oriented language such as VB.NET.

COURSE NO: DISSTRU

COURSE TITLE: Discrete Structures

PREREQUISITE: ALGEBRA

UNITS: 3

Course Description: This course covers logic, discrete probability, recurrence relations, Boolean algebra, sets, relations, counting, functions, maps, Big-O notation, proof techniques including induction, and proof by contradiction.

COURSE NO: FILIPI2

DESCRIPTIVE TITLE: Pagbabasa't Pagsusulat ng Iba't-Ibang Isip

PREREQUISITE: FILIPI1

UNITS: 3

Course Description: Ang kursong Filipi2 ay nagbibigay-focus sa pagbabasa at pagsulat sa mga pangangailangang akademik at instrumento sa pagkatuto. Pag-aaralan ang mga estratehiya sa kritikal na pagbasa ng iba't ibang genre ng nakasulat (maging naririnig) na textong pang-agham pantao. Ang pagsulat ukol sa mga paksang akademik, gayundin para sa komunkasyong pampropesyonal ay malaking bahagi ng tasks.

COURSE NO: PHYSED3

DESCRIPTIVE TITLE: Individual / Dual Sports

PREREQUISITE: PHYSED1

UNITS: 2

Course Description: This course is designed to offer undergraduate students an in-depth experience with various outdoor skills for individual and dual sports.

COURSE NO: QUALPRO

DESCRIPTIVE TITLE: Quality Processes

PREREQUISITE: NONE

UNITS: 3

Course Description: An in-depth study of the theoretical foundations of quality management along with applications of the quantitative and qualitative tools used in improving organizational quality and productivity. Coverage will include the principles promoted by major quality experts and a review of the requirements for corporate quality certification.

SECOND YEAR

SECOND SEMESTER

COURSE NO: AUTOMAT

DESCRIPTIVE TITLE: Automata and Language Theory

PREREQUISITE: DISSTRU

UNITS: 3

Course Description: This course introduces the models that represent the features at the core of all computers and their applications. The theory provides concepts and principles that help us understand the general nature of the computer science discipline. It also includes the introduction to the notion automaton and its application, formal languages, state machines, languages and grammars.

COURSE NO: COLPHYS2

DESCRIPTIVE TITLE: College Physics 2

PREREQUISITE: COLPHYS1

UNITS: 2/1

Course Description: This course is designed to give non-majors in engineering an introduction to electric circuits, semiconductor devices, and microelectronic circuits. It covers the basic principles of circuit analysis, transient analysis, AC steady-state analysis, introduction to semiconductor devices and fabrication, digital logic circuits, op-amps, and A/D and D/A conversion.

COURSE NO: DBMSYST

DESCRIPTIVE TITLE: Database Management System

PREREQUISITE: COMPRO2

UNITS: 2/1

Course Description: This course covers the Standard Query Language, the SQL BASIC AND SQL ADVANCE. It includes the creation of tables using the Microsoft Access and the same time creation with the same time creation with the SQL Statements. It covers also the introduction to the E-R Model for the better understanding what are the different meta data that is included in the creation of database, together with the equivalent terminology between Microsoft Access and E-R model.

COURSE NO: HUMANIT

DESCRIPTIVE TITLE: Introduction to Music and Art Appreciation

PREREQUISITE: NONE

UNITS: 3

Course Description: This course aims to help students understand ways in which literature and the fine arts can deepen their sense of what it means to be human. The course gives students practice appreciating masterpieces of painting, sculpture, architecture, music, poetry, prose narrative, theater, dance, and film.

COURSE NO: OPERSYS

COURSE TITLE : Operating Systems

PREREQUISITE: COMPORG

UNITS: 2/1

Course Description: This course covers the introduction of OS with UNIX/LINUX, DOS and WINDOWS as the OS. Topics include the Basic Commands in these operating system. Also includes the basic operation in windows, the creation of Batch Files in DOS. This also includes the electronic mail system in UNIX/LINUX and the basic tools and utilities of both DOS and UNIX/LINUX.

COURSE NO: PHYSED4

DESCRIPTIVE TITLE: Group / Team Sports

PREREQUISITE: PHYSED1

UNITS: 2

Course Description: This course introduces the students to the background, skills needed to play, officiating, rules and regulations and others, pertaining to Volleyball and Basketball.

COURSE NO: PROBSTA

DESCRIPTIVE TITLE: Probability and Statistics

PREREQUISITE: ALGEBRA

UNITS: 3

Course Description: Fundamentals of probability; discrete and continuous random variables; expected value; variance; joint, marginal, and conditional distributions; conditional expectations; applications, simulations; central limit theorem, order statistics.

COURSE NO: SYSTDES

DESCRIPTIVE TITLE: System Analysis and Design

PREREQUISITE: COMPRO2

UNITS: 3

Course Description: This course aims to clearly define the roles and purposes of a systems analyst in the growing field of data processing and thus shape students to becoming qualified entrants to the field of system analysis. To achieve major objective, this course is defined to clearly explain system design tools, system development life cycles and problems, analysis, detailed database design, and cost- benefit analysis.

THIRD YEAR

FIRST SEMESTER

COURSE NO: CSELEC1

DESCRIPTIVE TITLE: CS Elective 1

PREREQUISITE: 3RD YEAR STANDING

UNITS: 2/1

COURSE NO: MODSIMU

DESCRIPTIVE TITLE: Modeling and Simulation

PREREQUISITE: AUTOMAT

UNITS: 3

Course Description: In this course, students will learn to use the 2D model library for small rotations. This 2D model library is suited very well for modeling planar mechatronic systems. In this course, a strong focus is put on precision engineering. This course introduces the students to modelling and simulation concepts. Topics discussed in the course includes, system analysis and classification., abstract and simulation models, continuous, discrete, and combined models, heterogeneous models. It also covers pseudorandom number generation and testing, queuing systems, Monte Carlo method, and continuous simulation. Simulation experiment control.

COURSE NO: NETPRIN

DESCRIPTIVE TITLE: Network Principles

PREREQUISITE: OPERSYS

UNITS: 3

Course Description: An introduction to the study of computer networks. Current methods and practices in the use of networks are examined. Other topics include physical and architectural elements, information layers, and network tools. Various architectures are compared and contrasted. This course also examines a variety of network technologies and concepts, including: analog and digital telephony, voice digitization, digital transmission, multiplexing, switching, modulation techniques, synchronization control, network management, fiber-optic systems, mobile systems, ATM, digital subscriber access and traffic analysis. The focus in this course will be on understanding the underlying concepts and requirements relevant to these technologies, as well as implementation issues and practices.

COURSE NO: PHILLIT

DESCRIPTIVE TITLE: Philippine Literature

PREREQUISITE: NONE

UNITS: 3

Course Description: The study of literary forms or genres, exemplified this time by selected literary texts form in the Philippines written during different historical periods.

COURSE NO: PROGLAN

DESCRIPTIVE TITLE: Programming Languages

PREREQUISITE: COMPRO2, DATASTRU

UNITS: 3

Course Description: This is a course on the study of the principles of modern programming languages. The students perform a study of syntax, semantics, and pragmatics of high-level programming languages. The course also provides a discussion of listing processing, object-oriented, functional, procedural, or other programming paradigms.

COURSE NO: SOCIETY

DESCRIPTIVE TITLE: Society and Culture with Family Planning

PREREQUISITE: NONE

UNITS: 3

Course Description: The family as a structural and functional unit in social life and organization, as a unit of social control; its status, change, and associated problems.

COURSE NO: TECHWRI

DESCRIPTIVE TITLE: Technical Writing

PREREQUISITE: MODCOM2

UNITS: 3

Course Description: This course covers principles and procedure of technical writing; attention to analyzing audience and purpose, organizing information, designing graphic aids, and writing such specialized forms as abstracts, instructions, and proposals.

COURSE NO: WEBPROG

DESCRIPTIVE TITLE: Web Programming

PREREQUISITE: INTERNE

UNITS: 2/1

Course Description: This course provides an introduction to programming for the web. Specifically, students will learn how to program in a server-side scripting language (such as PHP [PHP Hypertext Preprocessor]) to create dynamically generated web pages. The course is offered in two streams. Those new to computing may attend the beginner stream where extra classes and an overview of computing fundamentals is offered. Those with some programming experience will attend the advanced stream. This course provides the students with the fundamental understanding of developing web-based applications and its corresponding support systems. The course requires the use of different technologies in order to implement various web-based software applications.

THIRD YEAR

SECOND SEMESTER

COURSE NO: ALGORIT

DESCRIPTIVE TITLE: Design and Analysis of Algorithm

PREREQUISITE: DATASTRU

UNITS: 3

Course Description: The course covers central notions and techniques in algorithms, computability, and complexity. The course is theoretical. Students will be required to understand mathematical proofs and to craft proofs by themselves. Algorithmic and analytic tools learned in the class should be handy for electrical, computer, and software engineers.

COURSE NO: CSELEC2

DESCRIPTIVE TITLE: CS Elective 2

PREREQUISITE: 3RD YEAR STANDING

UNITS: 2/1

COURSE NO: DIGIDES

DESCRIPTIVE TITLE: Digital Design

PREREQUISITE: COMPORG

UNITS: 2/1

Course Description: This course covers the basic tools for the design of digital circuits and provides method and procedures suitable for a variety of digital design.

COURSE NO: GENPSYCH

DESCRIPTIVE TITLE: General Psychology

PREREQUISITE: NONE

UNITS: 3

Course Description: It is a three unit course which deals with the study human behavior. It is particularly focused on the what, why and how of human behavior. Drug Education and prevention has been incorporated in the subject matter. Practical applications of the different learning experiences conducted with the students.

COURSE NO: LITWRLD

DESCRIPTIVE TITLE: Literatures of the world

PREREQUISITE: NONE

UNITS: 3

Course Description: The continued study of literary forms or genres, exemplified this time by selected literary texts form various countries, written during different historical periods.

COURSE NO: POLIGOV

DESCRIPTIVE TITLE: Politics and Governance with New Constitution

PREREQUISITE: NONE

UNITS: 3

Course Description: Poligov is an introductory course in political science that aims to provide students with systematic overview of the political world, with particular attention on the Philippine experience. It introduces students to the fundamental concepts, theories and methods in the study of politics, and their proper application in the process of political analysis. The course examines the structures, processes and environment that shape contemporary power relations and have a significant bearing on the practice of politics and governance. Through the course, students learn to use analytic frameworks in understanding contemporary issues in politics and governance.

COURSE NO: PROFETH

DESCRIPTIVE TITLE: Professional Ethics

PREREQUISITE: 3RD YEAR STANDING

UNITS: 3

Course Description: This course focuses on issues of professionalism that affect information professionals in their everyday work environment. Broad topical areas, which will be covered include professional ethics, standards of practice and professional competencies. The course will look at social trends to consider how they have an impact on “generally accepted practices” among professionals. We will also consider demographic indicators, business climate, and legal and regulatory proscription.

COURSE NO: SOFTENG

DESCRIPTIVE TITLE: Software Engineering

PREREQUISITE: COMPRO3

UNITS: 2/1

Course Description: This course covers the various software engineering techniques, methods, and tools, which can be used in the implementation of strategic systems development. It also covers project planning, software requirements, design concepts and principles, implementation, testing, delivery and maintenance.

FOURTH YEAR

SUMMER

COURSE NO: OJT

DESCRIPTIVE TITLE: Internship/OJT/Practicum

PREREQUISITE: 4TH YEAR STANDING

UNITS: 3

Course Description: The field practicum is a central learning experience in the

Bachelor of Science in Information Management. Students have the opportunity to apply knowledge gain from the previous academic years in the actual field under the supervision of an experienced professional and the practicum coordinator.

Practicum in the curriculum is "Industry Immersion" where a student will have to fit into a real office scenario and what he could contribute to the work place as Junior IT professional.

The student works in an office/agency/institution at the best with its information systems for 320 to gain practical training in one of the varied aspects of information and computer technology.

FOURTH YEAR

FIRST SEMESTER

COURSE NO: CSELEC3

DESCRIPTIVE TITLE: CS Elective 3

PREREQUISITE: 4TH YEAR STANDING

UNITS: 2/1

Course Description: This covers introduction to graphical user interfaces (GUI), event driven programming, and Windows on screen objects such as command buttons, text boxes, option buttons, and graphics. Programming projects will require students to design interactive screens as well as code subroutines to implement the programs.

COURSE NO: ECONTAR

DESCRIPTIVE TITLE: Economics with Taxation and Agrarian Reform

PREREQUISITE: NONE

UNITS: 3

Course Description: Analysis of the effects of taxation on economic behavior; taxation and public choice; the effects of taxation on the distribution of income; theory and empirical analysis of welfare effects of taxes; optimal tax theory; issues in tax policy and tax reform.

COURSE NO: FRELEC1

DESCRIPTIVE TITLE: Free Elective 1

PREREQUISITE: 3RD YEAR STANDING

UNITS: 2/1

Course Description: This course introduces a new programming environment to the students. It covers OOP concepts and implementation, language basics and common

Java Applets. It also covers GUI programming and Applets.

COURSE NO: FREELEC2

DESCRIPTIVE TITLE: Free Elective 2

PREREQUISITE: 3rd YEAR STANDING

UNITS: 2/1

Course Description: This course focuses on the creation, manipulation and development of graphics for all type of presentation using available resources. It leads towards the development of animated and streaming video clips by first hand experience.

COURSE NO: JPRIZAL

DESCRIPTIVE TITLE: Life, Works, and Writings of Dr. Jose Rizal

PREREQUISITE: NONE

UNITS: 3

Course Description: The course deals with the life, works and writings of Dr. Jose Protacio Mercado Rizal. It aims to present to the students the different attribute that made him acclaimed, " Great Malayan". It presents the richness of Rizal's thought and teaching which are his living legacies to the human race. The course further aims to let the students see themselves in Rizal's life they may realize the essence of their being a Filipino and that their national consciousness be awakened and help the Philippine attain greater heights. It is within the aim of this course that these young citizens develop in themselves a perspective and horizons patterned with that of Rizal which is worth emulating.

COURSE NO: THESIS1

DESCRIPTIVE TITLE: Thesis 1

PREREQUISITE: 4TH YEAR STANDING

UNITS: 2/1

Course Description: Introduces the topic through lectures with students having the opportunity to define and specify a medium-sized project. The lectures and the class project will cover topics in software engineering lifecycles, problem specification and analysis, system design techniques, and documentation.

FOURTH YEAR

SECOND SEMESTER

COURSE NO: CSELEC4

DESCRIPTIVE TITLE: CS Elective 4

PREREQUISITE: 4TH YEAR STANDING

UNITS: 2/1

Course Description: This course equips the students with fundamental concepts and techniques of expert systems. Skills in utilizing expert system shells to design expert systems for business related application are also practiced. This course covers topics of expert systems methodology including knowledge engineering, knowledge representation, inference, conflict, resolution, languages, and tools.

COURSE NO: FLDTRIP

DESCRIPTIVE TITLE: Field Trips and Seminars

PREREQUISITE: 4TH YEAR STANDING

UNIT: 1

Course Description: Topics offered at the graduate level which is not covered in regular courses. Students participate in preparing and presenting discussion material.

COURSE NO: FREELEC3

DESCRIPTIVE TITLE: Free Elective 3

PREREQUISITE: 3RD YEAR STANDING

UNITS: 2/1

COURSE NO: FREELEC4

DESCRIPTIVE TITLE: Free Elective 4

PREREQUISITE: 3RD YEAR STANDING

UNITS: 3

COURSE NO: THESIS2

DESCRIPTIVE TITLE: Thesis 2

PREREQUISITE: THESIS2

UNITS: 3

Course Description: This course focuses on the actual development programming, implementation and documentation of an application system or software. It gives the student the first-hand experience to apply their knowledge in structured or modular programming as well as in effective database management and software engineering by building and implementing a working software or application. Moreover, this course allows the student to test, debug, and evaluate the application he or she developed.