Outcome Based Education (OBE) Curriculum

**ASSOCIATE IN COMPUTER TECHNOLOGY  
Revised Curriculum**

**Major in MULTIMEDIA**

*Academic Year 2024-2025*

1. **GENERAL EDUCATION 30**
2. **Language and Humanities 9**

* ENGLISH

English 1 Purposive Communication 3

Literature The Contemporary Word 3

* Humanities (Literature, Arts, Philosophy, etc.) Humanities Art Appreciation 3

1. **Mathematics, Natural Sciences and Technology**

* MATHEMATICS **3**

Math 1 Mathematics in the Modern world 3

* ELECTIVES

Ethics Ethics 3

Science Science, Technology and Society 3

1. **Social Sciences and Communication 3**

* SOCIAL SCIENCE

Soc. Scie 1 Life and Works of Rizal 3

* ELECTIVES

Phil.Const. Reading in the Philippines History 3

1. **GENERAL EDUCATION ELECTIVES 9**

Mathematics, Science & Technology (Living in the IT Era) 3  
Social Science and Philosophy (Philippine Indigenous Communities) 3

Arts & Humanities (Peace Studies and Education) 3

1. **COMMON COURSES 15**

CC 101 Introductions to Computing 3

CC 102 Fundamentals of Progamming 3

CC 103 Intermediate Programming 3

CC 104 Data Structures and Algorithms 3

CC 105 Information Management 3

1. **PROFESSIONAL TRACK/ELECTIVES 18**

ACT-PT/Elec 101 Freehand and Digital Drawing 3

ACT-PT/Elec 102 Graphics Design 3

ACT-PT/Elec 103 Website Design 3

ACT-PT/Elec 104 Script Writing and Story Board Design 3

ACT-PT/Elec 105 Principles of 2D Animation 3

ACT-PT/Elec 106 GUI- Based Applications Development 3

1. **PROFESSIONAL ISSUES AND COMPUTING 3**

ACT- PIC 101 Professional Issues in Computing 3

1. **INTERNSHIP 6**

ACTPrac On The Job Training 6

1. **PHYSICAL EDUCATION 8**

PE 1 (PATHFIT1) Movement Competency Training (MCT) (2)

PE 2 (PATHFIT2) Exercise-based Fitness Activities (2)

PE 3 (PATHFIT3) Dance (Folk Dance) (2)

PE 4 (PATHFIT4) Sports (Volleyball/Basketball) (2)

1. **NSTP 6**

NSTP 1 Civil Welfare and Training Service 1 (3)

NSTP 2 Civil Welfare and Training Service 2 (3)

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*Academic Year 2024-2025*

**PROGRAM STRUCTURE**

**FIRST YEAR**

**First Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| CC 101 | Introduction to Computing | 2 | 1 | 3 | None |
| CC 102 | Fundamentals of Programming | 2 | 1 | 3 | None |
| GE-101 | English 1 (Purposive Communication) | 3 | 0 | 3 | None |
| GE-102 | Math 1 (Mathematics in the Modern World) | 3 | 0 | 3 | None |
| ACT-PT/Elec 101 | Freehand and Digital Drawing | 2 | 1 | 3 | None |
| PROF | Professional Issues in Computing | 3 | 0 | 3 | None |
| NSTP 1 | Civil Welfare and Training Service | 3 | 0 | (3) | None |
| PE 1 (PATHFIT1) | Movement Competency Training (MCT) | 2 | 0 | (2) | None |
|  |  | 20 | 3 | 23 |  |

**Second Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| CC 103 | Intermediate Programming | 2 | 1 | 3 | CC 102 |
| GE Elec. 1 | Mathematics, Science & Technology (Living in the IT Era) | 3 | 0 | 3 |  |
| GE Elec. 2 | Social Science and Philosophy (Philippine Indigenous Communities) | 3 | 0 | 3 |  |
| GE-103 | The Contemporary World | 3 | 0 | 3 | None |
| ACT-PT/Elec 102 | Graphics Design | 2 | 1 | 3 | None |
| ACT-PT/Elec 103 | Website Design | 2 | 1 | 3 | None |
| NSTP 2 | Civil Welfare and Training Service | 3 | 0 | (3) | NSTP 1 |
| PE 2 (PATHFIT2) | Exercise-based Fitness Activities | 2 | 0 | (2) | PE 1 (PATHFIT1) |
|  |  | 20 | 3 | 23 |  |

*PREPARED BY: NOTED BY: REVIEWED BY: NOTED BY:*

Engr. Jay A. Dadea, MIT Ramon S.L. Moraleda, LLB Alicia M. Nieto, MIT Rachel D. Casimero

**Dean Administrator/RMO Education Supervisor II Chief Education Program Specialist**

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*Academic Year 2024-2025*

**SECOND YEAR**

**First Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| CC 104 | Data Structures and Algorithms | 2 | 1 | 3 | CC 103 |
| ACT-PT/Elec104 | Script Writing and Story Board Design | 2 | 1 | 3 | ACT-PT/Elec 102 |
| ACT-PT/Elec 105 | Principles of 2D Animation | 2 | 1 | 3 | ACT-PT/Elec 102 |
| GE Elec.3 | Arts & Humanities (Peace Studies and Education) | 3 | 0 | 3 | None |
| GE-104 | Art Appreciation | 3 | 0 | 3 | None |
| GE-105 Soc. Scie 1 | Soc. Scie 1 (Life and Works of Rizal) | 3 | 0 | 3 | None |
| GE – 106 History 1 | Reading in the Philippine History | 3 | 0 | 3 | None |
| PE 3 (PATHFIT3) | Dance (Folk Dance) | 2 | 0 | (2) | PE 2 (PATHFIT2) |
|  |  | 20 | 3 | 23 |  |

**Second Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **LEC UNIT(S)** | **LAB**  **UNIT(S)** | **UNIT(S)** | **PRE-**  **REQUISITES** |
| OJT | On-the-Job Training (320 hours) | 6 | 0 | 6 | None |
| ACT-PT/Elec 106 | GUI- Based Applications Development | 2 | 1 | 3 | ACT-PT/Elec 105 |
| ACT-C 105 | Information Management 1 | 2 | 1 | 3 | ACT-C 103 |
| PE 4 (PATHFIT4) | Sports ( Volleyball/Basketball) | 2 | 0 | (2) | PE 3 (PATHFIT3) |
|  |  | 12 | 2 | 14 |  |

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**SAMPLE MEANS OF CURRICULUM DELIVERY**

The ACT degree program may also be offered to graduates of any baccalaureate degree program who intend to pursue a career in computing. Courses taken under ACT by baccalaureate graduates may be considered as partial preparation for ITE program graduate programs.

The ACT degree program also prepares graduates for immediate employment after completion of the internship program.

The graduate outcomes of the Associate in Computer Technology curricula are achieved through but not limited to the following activities:

1. Recognize the need and have the ability to engage in independent learning for continual development as computing professional;
2. Effectively communicate orally and in writing using both English and Filipino;
3. Work effectively either independently or as a member of a team;
4. Act in recognition of professional, social, and ethical responsibility;
5. Preseve and promote “*Filipino hisorical and cultural heritage”* (based on RA 7722)
6. Assist in analysis of complex problems;
7. Apply modern computing technologies
8. Mentorship and Monitored Internship.

|  |
| --- |
| **Table I: CURRICULUM** |

|  |  |  |
| --- | --- | --- |
| **COURSE**  **Bachelor of Science in Information Technology**  **(Networking)** | **Required Minimum Number of Units per CMO No. 13, Series 2021** | **Institution** |
| General Education | 15 | 30 |
| ITE Common Computing | 15 | 15 |
| Professional Track/Electives | 18 | 18 |
| Professional Issues in Computing | 3 | 3 |
| Internship (320hours) | 6 | 6 |
| PATHFIT | 8 | 8 |
| NSTP | 6 | 6 |
| Minimum Total Units | 71 | 86 |

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**COURSE DESCRIPTION**

**SUBJECT Units Lec Lab**

**Purposive Communication 3 3 0**

Purposive communication is a three-unit course that develops students’ communicative competence and enhances their cultural and intercultural awareness through multimodal tasks that provide them opportunities for communicating effectively and appropriately to a multicultural audience in a local or global context. It equips students with tools for critical evaluation of a variety of texts and focuses on the power of language and the impact of images to emphasize the importance of conveying messages responsibly. The knowledge, skills, and insights that students gain from this course may be used in their other academic endeavors, their chosen disciplines, and their future careers as they compose and produce relevant oral, written, audio-visual and/or web-based output for various purposes

**Mathematics in the Modern World 3 3 0**

The course deals with nature of mathematics, appreciation of its practical, intellectual, and aesthetic dimensions, and application of mathematical tools in daily life.

The course begins with an introduction to the nature of mathematics as an exploration of patterns (in nature and the environment) and as an application of inductive and deductive reasoning. By exploring these topics, students are encouraged to go beyond the typical understanding of mathematics as merely a set of formulas but as a source of aesthetics in patterns of nature, for example, and a rich language itself (and of science) governed by logic and reasoning.

The course then proceeds to survey ways in which mathematics provides a tool for understanding and dealing with various aspects of present-day living, such as managing personal finances, making social choices, appreciating geometric designs, understanding codes used in data transmission and security, and dividing limited resources fairly. These aspects will provide opportunities for actually doing mathematics as way of knowing, and test the students understanding and capacity.

**Introduction to Computing 3 2 1**

This course provides an overview of the computing industry and computing profession, including research and applications in different fields; an appreciation of computing in different fields such as biology, sociology, environment and gaming, an understanding of ACM requirements, an appreciation of the history of computing and knowledge of the key components of computer systems, malware, computer security, internet and internet protocols, HTML 4/5 and CSS.

**Fundamentals of Programming 3 2 1**

This is an introductory course in programming which aims to develop skills and concepts that are essentials to good programming practice and problem solving. It covers fundamental programming concepts of primitive data types, arrays, simple I/O, conditional statements, iterative structures and functions. It also includes the use of testing and debugging techniques. Fundamental to the software development practice is the ability to develop programs that uses appropriate constructs aside from achieving desired

**Freehand and Digital Drawing 3 2 1**

This course focuses on the development of observational skills and drawing techniques, employinga wide range of drawing media including charcoal, graphite, content, and ink. Students in this course will develop both technical abilities and creative responses to material and subject matter. No prior experience with drawing is required or expected. Additionaly, students will learn how to critique drawings and receive critcism and advice from fellow students and the instructor. Learning to articulate artistic concepts and processes using discipline specific vocabulary is a fundamental part of arts eduacation. This course will focus heavily on this practice.

**Civil Welfare and Training Service 1 3 3 0**

The Civic Welfare Training Services (CWTS) as a component of the Civil Welfare and Training Service (NSTP) is a course for the first year students both male and female designed to help them understand, appreciate and eventually live by the concepts of the Students Transformation and Enrichment for Truth (STET) with the end in view of empowering them in becoming a potent resource community development.

**Physical Fitness and Gymnastics 2 2 0**

This course introduces the good posture and the movements of physical body. It contains information and activities the students can use throughout their lives. It also contains suggested areas for the basic physical education program which will provide the students practical and scientifically sound introduction to exercise and fitness. Topics on this course where included for better understanding of the structure and function of the body systems which lead to more appropriate and sound fitness practices.

**The Contemporary World 3 3 0**

This course introduces students to the contemporary world by examining multifaceted phenomenon of globalization. Using the various disciplines of the social sciences, it examines the economics, social, political, technological, and other transformations that have created an increasing awareness of the interconnectedness of peoples and places around the glove. To this end, the course provides an overview of the various debates in global governance, development, and sustainability. Beyond exposing the students to the world outside the Philippines, it seeks to inculcate a sense of global citizenship and global responsibility.

It also includes the discussion of **REPUBLIC ACT NO. 6365 – AN ANCT ESTABLISHING A NATIONAL POLICY, CREATING THE COMMISSION ON POPULATION ANDFOR OTHER** in the context of Population and Demography.

**The Contemporary World 3 3 0**

**Intermediate Programming 3 2 1**

This course trains students on the proper and judicious use of recursive code structure, proper parameter passing methods, data structures beyond primitive types and simple arrays of primitive types, and text files. The course also trains students on how to plan and execute ways to test their code with respect to common and boundary cases and on how to properly format and document their code with respect to appropriate coding standards.

**Graphics Design 3 2 1**

This course equips the students with the skills to develop interactive 2D multimedia artifacts using authoring and editing tools. Emphasis is on the different multimedia elements such as audio, video, text, animation, and still images. Topics include multimedia principles and concepts, multimedia, hardware,software and project management; storyboarding and interactive application.

**Website Design 3 2 1**

This course deals with the design and development of web pages and web sites. Emphasis is on user-interface design, aesthetics, and scripts using various web technologies and services. Topics include world wide web, internet technologies, hypertext markup language (HTML), cascading style sheets (CSS) and JavaScript.

**Professional Issues in Computing 3 3 0**

Topics include computer and information ethics, social implications of technology, current trends in computer science and information technology applications and development, professional issues,a and emerging trends and current topics in computer science research.

**Civil Welfare and Training Service 2 2 2 0**

The Civic Welfare Training Service (CWTS 2) is a sequel to CWTS. It is designed to immerse students in activities that will arm them the capacity to contribute in the upliftment of the general welfare and the quality of life of the community and the enhancement of its facilities especially those

that are devoted to improving the health, environment, entrepreneurship, safety, recreation and morale of the citizen

**Individual and Team Sports 2 2 0**

This course introduces Individual ad Dual Sports such as Athletics, Table Tennis, badminton, Arnis and Swimming. It includes discussions of history when and where it was originated, the facilities and equipment, the players, how to play safely the said game and disseminating of rules of every individual games in order to fit the needs of the students and for them to gain a general comprehension and unified view of the entire course and also to find enjoyment. Physical activities include all movements that can contribute to improve health. Physical Education activities through sports programs improve the quality of life and the physical well-being of an individual.

**Art Appreciation 3 3 0**

This course is a three-unit course that develops student’s ability to appreciate, analyze and critique work of art. Through interdisciplinary and multimodal approaches, this course equips students with a broad knowledge of the practical, historical, philosophical, and social relevance of the arts in order to hone student’s ability to articulate their understanding of the arts. The course also develops students’

competency in researching and curating art as well as conceptualizing, mounting and evaluating art productions. The course aims to develop students’ genuine appreciation for Philippines Arts y providing them opportunities to explore the diversity and richness and their rootedness in Filipino culture.

**Life and Works of Rizal 3 0 0**

A course on the life, works, ideas, and ideals of Jose Rizal which aims to provide students an in-depth appreciation of Rizal’s contribution to the building of Filipino nationhood. The course involves the critical and analytical discussion of Rizal in the context of Philippine History.

**Reading in Philippine History 3 0 0**

The course analyzes Philippine History from multiple perspectives through the lens of primary sources coming from various disciplines and of different genres. Students are given theopportunities to analyze the author’s background and main arguments, compare different pointsof view, identify biases and examine the evidences presented in the document. The discussionswill tackle traditional topics in history and other interdisciplinary themes deepen and broadentheir understanding of Philippine political, economic, cultural, social, scientific and religioushistory. Priority is given to primary materials that could help students develop the historical andcritical consciousness of the students so that they will become versatile, articulate, broad minded, morally upright and responsible citizen.This course also includesthe topic on history of the Philippine constitution from 1899 Malolos Constitution to the 1987 Constitution.

This further includes the topic on the Philippine Agrarian/Land Reform under RA 6657.otherwise known as Comprehensive Agrarian Reform Law.

**Data Structures and Algorithms 3 2 1**

An overview of data structure concepts, arrays, stack, queues, trees, and graphs. Discussion of various implementations of these data objects, programming styles, and run-time representations. Course also examines algorithms for sorting, searching and some graph algorithms. Algorithm analysis and efficient code design is discussed.At the end of the course, the students are expected to be able to incorporate algorithmic design know-how and data structures to create reliable and structured programs.

**Information Management 1 3 2 1**

The course covers the basic theories behind database, data models and database analysis and design. The course will tackle different data models but will concentrate mainly on relational databases, being the most commonly used today. The course introduces learners to concepts on conceptual design of databases using then concepts of the Entity- Relationship (ER) model and normalization, relational model, relational database design and database query languages.

**Script Writing & Story Board Design 3 2 1**

This is a basic course in the principles and practice of writing fro all Visual Storytelling categories. Emphasis is placed upon the essentials of screenplay structure, format, sequence, characterization, and the writing scenes. Students will learn fundamentals of scriptwriting and be familiarized with the elements and tools of screenwriting for both Live-Action, Animation/

**Principles of 2D Animation 3 2 1**

Students will learn to design and create motion graphics for multimedia, building projects appropriate both for Internet applicationsand for film and video. Students will learn how to use Animate, a vectorbased animation program animation program, and After Effects, an animation and visual effects compositing program to create narratives through the use of storyboards.

**Rhythmic and Folkdances 2 2 0**

This course highlights the application of the rhythmic bodily movements which have emphasis on fundamental rhythm, basic dance steps and appreciation of the country’s rich cultural heritage which strengthens the awareness on dance education as a global perspective in the 21st century. Students will be given varied rhythmic activities and experiences to develop their skills and creativity in dancing

**GUI – Based Applications Development 3 2 1**

This course will concentrate on facilitating the student’s production of animated projects. The topics of idea generation, experimentation, problem solving, planning and time management, and the process of critical analysis will be applied to the student’s work, with the choice of animation technique, content, and form left to the individual. Students will learn the importance of bringing projects to completion.

**Recreational Sports 2 2 0**

This course introduces Recreational Activities such as Badminton, Bowling and Swimming. It includes discussion of history, facilities and equipment, the payers, how to play safely the said game and disseminating of rules every individuals games in order to fit the needs of the students and for them to gain a general comprehension and unified view of the entire course and also to find enjoyment.

**On-the-Job Training 6 0 6**

OJT or Practicum is a non-classroom learning environment. The objective of the said practicum program is to provide students with the opportunity to develop confidence, exercise judgment and to apply the diversified skills, knowledge and attitude learned in school and at the same time the opportunity to experience the corporate environment.

**Mathematics, Science & Technology 3 0 0**This course covers the study on basic transition that began in the mid-20th century in a traditional industry characterized by Industrial Revolution to an economy based upon information technology.   
The said course provides an overview about Information Communication Technology, elements of a computer system and how ICT be used in appositive way. Thru the creation of different outputs like AVPs, digital posters and cartoons it will help teachers demonstrate how verbal and non-verbal classroom strategies.

**Peace Studies and Education 3 0 0** This course enable the students and teachers to advocate peace with training as Peace educators and students. The said course will acquire a holistic and critical understanding of the theory and practice of peace education. It will also enhance students intellectual flexibility, creativity and problem- solving capacities.

**Social Science & Philosophy 3 0 0**This course provides a study of indigenous groups in the Philippines. Their way of Life, role and contribution to Filipino society. The said course gives emphasis on the rights protection and preservation of their culture as they are the identity of our country that needs to be learned continuously.