**College of Engineering Course Information/Curricular Offerings – Caloocan Campus**

[**Bachelor of Science in Civil Engineering**](https://www.ue.edu.ph/mla/p/curriculum.php?c=NCE2023)**(BSCE)**

Civil engineering deals with the design,construction and maintenance of physical and naturally built environments, including works such as bridges, roads, canals, dams and buildings. This field is traditionally broken into several subdisciplines, including environmental engineering, geotechnical engineering, structural engineering, transportation engineering, municipal or urban engineering, water sources engineering, materials engineering, coastal engineering, surveying and construction engineering. Civil engineering takes place on all levels: in the public sector from municipal to national levels, and in the private sector from individual home owners to international companies.

**Career Opportunities**

* Project Manager
* Project Engineer
* Structural Engineer
* Resident Engineer
* Quantity Surveyor
* Quality Control Engineer
* Application Engineer
* Project Control Executive
* Site Engineer
* Planning Engineer
* Design Engineer
* Water and Sanitation Engineer

**UE’s CE Achievements**

Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA), Level II  
Accredited and Level III Candidate Status, UE’S CE licensure exam topnotchers include Engrs. Ritchie M.  
Maquiran (8th, November 2017) and Dominic Isidro (2nd, May 2015), among many others.

[**Bachelor of Science in Electrical Engineering**](https://www.ue.edu.ph/mla/p/curriculum.php?c=NEE2023)**(BSEE)**

Electrical engineering deals with the generation, transmission, distribution and utilization of electricity.  
It also deals with the design, operation and protection, maintenance and economics of electrical  
systems with emphasis on ethical values to harness economically and safely the materials and forces of  
nature for the benefit of society and of the environment.

**Program Educational Objectives**

*Three to five years after graduation, the Electrical Engineering alumni shall:*  
1. have pursued advancement towards Electrical Engineering practice to become a globally competitive Professional Electrical Engineers  
2. be contributors to the development in the practice of Electrical Engineering both locally and international and to promote high standard of electrical engineering practice for the welfare of the society and the environment.

**Program Outcomes:**  
*By the time of graduation, the students of the program shall have the ability to:*  
a. Apply knowledge of mathematics and sciences to solve complex engineering problems;

b. Develop and conduct appropriate experimentation, as well as to analyze and interpret data;

c. Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, in accordance with standards;

d. Function effectively on multi-disciplinary and multi-cultural teams that establish goals, plan tasks, and meet deadlines; (based on PQF Level 6 descriptor)

e. Identify, formulate and solve complex problems in electrical engineering;

f. Recognize ethical and professional responsibilities in engineering practice;

g. Communicate effectively with a range of audiences;

h. Understand the impact of engineering solutions in a global, economic, environmental, and societal context;

i. Recognize the need for additional knowledge and engage in life-long learning;

j. Articulate and discuss the latest developments in the field of electrical engineering; (PQF Level 6 descriptor)

k. Apply techniques, skills and modern engineering tools necessary for electrical engineering practice; and

l. Demonstrate knowledge and understanding of engineering and management principles as a member and/or leader in a team to manage projects in a multidisciplinary environment.

**Electrical Engineering Curriculum**

The Electrical Engineering curriculum is designed to produce engineers equipped with  
knowledge in complex mathematics, natural and physical sciences, and engineering fundamentals.  
General education courses are included to ensure that the graduates knows their role and  
responsibilities in society.

*The Electrical Engineering offers the following specialized track:*

Track 1: Power System Protection  
Track 2: Advanced Power System Analysis  
Track 3: Electrical Estimating and Auditing  
Track 4: Machine Automation and Process Control

**Career Opportunities**

The graduates of Electrical Engineering may go into the following career opportunities :

* Power Engineer (Power System Operation, Power System Protection, Power System Economics, Power Plant)
* Design Engineer (Advance Power System, Advance Electrical Designer, Machine Automation and Process Design)
* Illumination Engineer
* Entrepreneur
* Sales Engineer
* Distribution Engineer
* System Distribution Engineering
* Engineering Educator and Researcher
* Instrumentation and Control Engineer
* Safety Engineer
* Maintenance Engineer
* Construction and Project Engineer
* Electrical Design Inspector

**The Laboratory**

The laboratory equipment in the Electrical Engineering Department provides the necessary in-depth experience and training of students in electrical, electronic and computing equipment as well as experimental techniques and skills in the use of modern laboratories.

The Electromechanical Training System equipment of Lab Volt combines a modular design approach with computer-based data acquisition and control to provide unparalleled training in electromechanical systems.

This equipment is oriented towards competence requirements which includes electricity fundamentals (i.e., dc power circuits), single-phase and three-phase ac power circuits, power transformers, three-phase transformer banks, dc machines, three-phase rotating machines (induction machine and synchronous machine), and power factor correction.

The system features the Dynamometer/Power Supply, and the Data Acquisition and Control Interface, and state-of- the-art USB peripherals that greatly enhance the learning experience of students.

The AC Power Transmission Training System equipment of Lab Volt combines a modular design approach with computer-based data acquisition and control to provide unparalleled training in ac power transmissions systems to students having a basic knowledge in power technology (dc power circuits, single-phase ac power circuits, and single-phase power transformers). The system features the Data Acquisition and Control Interface, Model 9063, a state-of-the-art USB peripheral that greatly enhance the learning experience of students.

The PLC and Electro-Pneumatics Trainer gives the students a hands-on experienced in programming PLC and integrating it to pneumatic devices and other I/O devices available in this trainer. The students may create their own simulation experiments on the freeware provided by the MELSEC, a Mitsubishi Electric PLC Series and apply the same to this PLC trainer which is powered by the Mitsubishi Electric F-Series.

**Achievements**

Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA), Level I Accredited

###### [**Bachelor of Science in Computer Engineering**](https://www.ue.edu.ph/mla/p/curriculum.php?c=NBSCPE2023)**(BSCpE)**

Computer engineering deals with the application of engineering principles and methodologies in the analysis, design, implementation and management of hardware and software, and the integration of both.

The Computer Engineering (CpE) Program educates students to understand both sides of the hardware-software interface, from designing circuits to creating operating systems. Multidisciplinary in scope, the CpE curriculum integrates the fields of electrical engineering and computer science. This program will uniquely prepare CpE graduates to design and develop embedded digital and computer systems. Graduates with a degree in CpE will be highly skilled and ideally suited for 21st-century industries, including the games industry.

UE CpE concentrates on the practical application of theoretical learning through a variety of semestral and year long projects. Students will have increasing levels of creative control in their projects and receive feedback from expert instructors.

**Program Educational Objectives**

*Three to five years after graduation, the Computer Engineering alumni shall:*  
1. have pursued advancement towards becoming globally competitive leaders in their chosen  
    field of practice.

2. be contributors to the development of a progressive society, guided by the UE core values of  
    Excellence, Integrity, Professionalism, Teamwork, Commitment, Transparency, Accountability  
    and Social Responsibility.

**Student Outcomes**

1. Ability to apply knowledge of mathematics and science to solve engineering problems.
2. Ability to design and conduct experiments, as well as to analyze and interpret data.
3. Ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, in accordance with standards.
4. Ability to function in multidisciplinary teams.
5. Ability to identify, formulate and solve engineering problems.
6. Understanding of professional and ethical responsibilities.
7. Ability to communicate effectively.
8. Broad education necessary to understand the impact of engineering solutions in global, economic, environmental and societal contexts.
9. Recognition of the need for and an ability to engage in lifelong learning.
10. Knowledge of contemporary issues.
11. Ability to use techniques, skills and modern engineering tools necessary for engineering practice.
12. Knowledge and understanding of engineering and management principles as a member and leader in a team, to manage projects in multidisciplinary environments.

**Program Outcomes:**  
*By the time of graduation, the students of the program shall have the ability to:*  
a. Ability to apply knowledge of mathematics and sciences to solve complex engineering  
    problems;

b. Ability to design and conduct experiments, as well as to analyze and interpret data;

c. Ability to design a system, component, or process to meet desired needs within  
    realistic constraints such as economic, environmental, social, political, ethical, health  
    and safety, manufacturability, and sustainability, in accordance with standards;

d. Ability to function in multi-disciplinary teams;

e. Ability to identify, formulate and solve complex problems in computer engineering problems;

f. Understanding of professional and ethical responsibility;

g. Ability to communicate effectively;

h. Broad education necessary to understand the impact of engineering solutions in  
     global, economic, environmental, and societal context;

i. Recognition of the need for, and an ability to engage in life-long learning;

j. Knowledge contemporary issues;

k. Ability to use techniques, skills and modern engineering tools necessary for computer  
    engineering practice; and

l. Knowledge and understand engineering and management principles as a member and  
   leader in a team, and to manage projects and in a multidisciplinary environment.

**The Computer Engineering Curriculum**

The CpE curriculum and student projects will focus on embedded systems, a term that refers to  
any device that uses a microprocessor or microcontroller for a specific purpose. Embedded systems  
appear in a wide array of household and industrial systems, and including portable and console game  
systems, robots, game peripherals, electronic toys, digital cameras, audio/video component systems,  
and even aircraft flight systems.

**The UE CPE Design And Laboratory Experience**

The computer engineering program at UE is a balance of engineering science and design. The freshman and sophomore year courses are structured to lay a solid foundation for the junior and senior level design courses by the introduction of courses in hardware, software and the engineering sciences (math, physics, and chemistry).

Design methodology and analysis techniques are stressed throughout the curriculum in the majority of the core courses required for graduation. The lecture classes are typically complemented by laboratory experiments that the student has designed, simulated and analyzed before commencing with the actual hands-on construction and testing. Students are well prepared in the software/hardware design procedure when they reach the final classes of Microprocessor System Design and the Senior Project Classes.

Skills in both software and hardware are employed in the design of a microcomputer system that require the student to write his own operating system in a high-level language ( e.g. C or C++) with embedded assembly language. The hardware support requirement is the design and implementation of a direct memory access (DMA) controller using a PLD or FPGA and a peripheral interface controller that supports a printer and an external bus. Students have several pattern electives to choose from in advanced software and hardware design classes. Such classes include topics in networks, embedded systems, VHDL, digital signal processing, state machine design, VLSI, control systems, communications and artificial intelligence.

The senior project class brings together, in a balance of solid software and hardware skills acquired throughout the required and elective curriculum, a culminating experience which involves teamwork, design, report writing and oral presentation. These experiences prepare our graduates to be successful engineers with an awareness of the many challenges involved in the workplace

**Applications of computer engineering include:**

***Technology Areas***

Applications of computer engineering include:  
Technology Areas  
• Robotics and Automation  
• Artificial Intelligence  
• Operating Systems  
• Information Systems  
• Telecommunications  
• Signal Processing  
• Control Systems and Instrumentation  
• Data Analytics  
• IT Infrastructure  
• Mobile and Web Applications

**Application Domains**  
• Multimedia Aerospace and Avionics  
• Automotive  
• Consumer Electronics  
• Medical Sciences  
• Internet  
• Entertainment  
• Game System Hardware  
• Electronic Toys  
• Virtual Reality Hardware  
• Human Interface Devices  
• Military

**Career Opportunities**

• Project Engineer/Manager  
• Network System Administrator/Manager  
• Data Communications Engineer  
• Systems Engineer/Developer/Manager  
• Systems Analyst/Designer  
• Technical Support Engineer/Manager  
• Test Engineer  
• “Technopreneur”  
• Software Engineer  
• Quality Assurance Engineer  
• Educator and Researcher

**UE’s CPE Achievements**

Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA), Level II  
Candidate Status

[**Bachelor of Science in Mechanical Engineering**](https://www.ue.edu.ph/mla/p/curriculum.php?c=NME2023)**(BSME)**

Mechanical engineering deals with machine design, energy conversion, fuel and combustion technologies, heat transfer, materials, noise control and acoustics, manufacturing processes, rail transportation, automatic control, product safety and reliability, solar energy and technological impacts to society.

Mechanical engineering is one of the broadest and oldest branches of engineering and can require work that ranges from the design and manufacture of very fine and sensitive instruments to the design and fabrication of mammoth power plants. It deals with all aspects of the conversion of thermal energy into useful work and the machines that make this possible.

Mechanical engineering involves the creative design, manufacturing, testing, evaluation and distribution of such devices as automobiles, home appliances, spacecraft, rocket engines, air-conditioning equipment, nuclear and fossil fuel power plants, controls, robotics, and many types of instruments.

In order to prepare for such a broad field, mechanical engineers must have a solid foundation in physics, chemistry and mathematics. This field also includes studies in basic mechanics of solids and fluids, electricity and electronics, controls, dynamic analysis, mechanical design, thermodynamics, and heat transfer.

Program Educational Objectives

*Three to five years after graduation, the Mechanical Engineering alumni shall:*  
1. have pursued advancement towards becoming globally competitive leaders in their chosen field of practice.  
2. be contributors to the development of a progressive society, guided by the UE core values of Excellence, Integrity, Professionalism, Teamwork, Commitment, Transparency, Accountability and Social Responsibility.

1. Ability to apply knowledge of mathematics and science to solve engineering problems.
2. Ability to design and conduct experiments, as well as to analyze and interpret data.
3. Ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, in accordance with standards.
4. Ability to function in multidisciplinary teams.
5. Ability to identify, formulate and solve engineering problems.
6. Understanding of professional and ethical responsibilities.
7. Ability to communicate effectively.
8. Broad education necessary to understand the impact of engineering solutions in global, economic, environmental and societal contexts.
9. Recognition of the need for and an ability to engage in lifelong learning.
10. Knowledge of contemporary issues.
11. Ability to use techniques, skills and modern engineering tools necessary for engineering practice.
12. Knowledge and understanding of engineering and management principles as a member and leader in a team, to manage projects in multidisciplinary environments.

The Mechanical Engineering Curriculum

After completing the Fundamentals of Engineering course and learning the mathematics and  
science (physics, chemistry) foundation courses necessary for the study of engineering science, students  
proceed with the materials science, solid and fluid mechanics, thermodynamics, heat transfer, machine  
design, and system dynamics.

Elective courses in Mechanics and Material Sciences, Design and  
Manufacturing, Mechatronics, and Energy Systems are pursued toward career goals. A team-based  
senior project completes the technical education.

The Mechanical Engineering curriculum is constructed to include abundant experiential learning.  
This is accomplished through the integration of laboratory experiences within the framework of the  
theoretical courses in the basic curriculum, and by making use of well-equipped laboratories and  
computing facilities.

Concentrations in manufacturing engineering, control systems and automation  
engineering are available in this program, with a focus on robotics and automation, feedback and  
product and process design, and manufacturing systems. A multidisciplinary field, it integrates

knowledge from the areas of science, mathematics, computers, mechanical engineering, electronics  
engineering, and automation. Following courses in fundamental engineering knowledge, students learn  
how to apply sound scientific principles to solve practical problems in industry in the area of  
manufacturing engineering.

This concentration places an emphasis on the application of computer  
systems to modern manufacturing by means of topics such as robotics, computer-aided design (CAD),  
hydraulics and pneumatics systems (H&amp;P), programmable logic controllers (PLC), computer-aided  
manufacturing (CAM) and computer-integrated manufacturing (CIM).

*The Mechanical Engineering offers the following specialized track:*  
Track 1: Energy Engineering and Management  
Track 2: Mechanical Equipment for Buildings

**Program Outcomes:**

*By the time of graduation, the students of the program shall have the ability to:*  
a. Apply knowledge of mathematics and science to solve complex mechanical engineering problems;  
b. Design and conduct experiments, as well as to analyze and interpret data;  
c. Design a system, component, or process to meet desired needs within realistic constraints, in accordance with standards;  
d. Function in multidisciplinary and multi-cultural teams;  
e. Identify, formulate, and solve complex mechanical engineering problems;  
f. Understand professional and ethical responsibility;  
g. Communicate effectively;  
h. Understand the impact of mechanical engineering solutions in a global, economic, environmental, and societal context;  
i. Recognize the need for, and engage in life-long learning;  
j. Know contemporary issues;  
k. Use techniques, skills, and modern engineering tools necessary for mechanical engineering practice;  
l. Know and understand engineering and management principles as a member and leader of a team, and to manage projects in a multidisciplinary environment.

**Areas of Mechanical Engineering**

• Aeroelasticity  
• Air Pollution  
• Biomechanics  
• Biomedical Engineering  
• Combustion  
• Computer-aided Design  
• Dynamics  
• Turbomachinery  
• Vibrations  
• Rotocraft Dynamics  
• Materials Science  
• Materials Engineering

**Career Opportunities**

• Project Engineer  
• Power Plant Supervisor/Manager  
• Design Engineer for Manufacturing  
• Fabrication Supervisor/Manager  
• Automotive Engineer  
• Safety Engineer  
• Sales Engineer  
• Entrepreneur  
• Material Testing Engineer  
• Heating, Ventilation and Air-Conditioning (HVAC) Engineer  
• Instrumentation and Control Engineer  
• Educator and Researcher  
• Robotics and Mechatronics Engineer  
• Industrial Process Engineer  
• Project Management Consultant

Mechanical engineers study the behaviour of solids, liquids and gases when forces are applied to  
them and when they are heated and cooled. They learn how to convert energy efficiently from one form  
to another. Using this knowledge base, mechanical engineers play key roles in the design of  
transportation systems, including automobiles and space vehicles; environmental control systems and  
processes, including robots; energy conversion technology, including engines and power plants;  
biomedical devices; and so on. The tremendous breadth of Mechanical Engineering gives the mechanical  
engineer access to employment in every major industry.  
Mechanical engineers have traditionally been concerned with a great variety of technologies,  
such as energy conversion, machine design, instrumentation and control of physical processes, and

control of the environment. Mechanical engineers fill essential roles in the entire spectrum of industrial  
enterprises, including even apparently “non-mechanical” ones such as the aerospace, chemical,  
computer and electrical power industries. Some new and exciting areas currently demanding mechanical  
engineers’ expertise include the artificial organ (heart, lungs, kidneys) and prosthetic limb and joint  
design, high-performance composite materials development, flexible manufacturing, mechanical design  
automation, and the control of industrial environmental pollution.

**UE’s M.E. Achievements**

Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA), Level II  
Candidate Status  
UE’S ME licensure exam consistently attained a 100 percent passing percentage (March 2018 up to  
September 2016, March 2015, March 2013) and also include topnotcher Engr. Allen Kristoffer A. Andres  
(7th, September 2012).

[Bachelor of Science in Information Technology](https://www.ue.edu.ph/mla/p/curriculum.php?c=CIT2023) (BSIT)

The Bachelor of Science in Information Technology program emphasizes the acquisition of concepts and technologies, preparing and enabling the student for the industrial practice of systems integration, systems administration, systems planning, systems implementation, and other activities that maintain the integrity and proper functionality of a system and its components. It is expected that a student graduating under this degree program had undergraduate or industry preparation that would have exposed him/her to programming concepts and skills as well as the operating environment of a network system.

**PROGRAM OUTCOMES (from CMO)**

The program must enable students to attain, by the time of graduation:

1. An ability to apply knowledge of computing, science, and mathematics appropriate to the discipline.
2. Understand best practices and standards and their applications.
3. An ability to analyze complex problems, and identify and define the computing requirements appropriate to its solution.
4. Identify and analyze user needs and take them into account in the selection, and creation, evaluation, and administration of computer-based systems.
5. An ability to design, implement, and evaluate computer-based systems, processes, components or programs to meet desired needs and requirements under various constraints.
6. Integrate IT-based solutions into the user environment effectively.
7. Apply knowledge through the use of current techniques, skills, tools, and practices necessary for the IT profession.
8. Function effectively as a member or leader of a development team recognizing the different roles within a team to accomplish a common goal.
9. Assist in the creation of an effective IT project plan.
10. Communicate effectively with the computing community and with society at large about complex computing activities through logical writing, presentations, and clear instructions.
11. Analyze the local and global impact of computing information technology on individuals, organizations, and society.
12. Understand professional, ethical, legal, security, and social issues and responsibilities in the utilization of information technology.
13. Recognize the need for an engagement in planning self-learning and improving performance as a foundation for continuing professional development.

**PROGRAM EDUCATIONAL OBJECTIVES (IT)**

Graduates of the program, within a few years after graduation, will be expected to

1. Pursue a successful career as computing professionals, utilizing the knowledge acquired in the program;
2. Maintain high professionalism and ethical standards as individuals or member of a team, in solving multidisciplinary projects related to Computer and Information Technology problems;
3. Demonstrate effective oral and written communication skills;
4. Demonstrate a good breadth of knowledge in the core areas of IT, so as to create products and solutions for real-life problems; and to make a positive impact on society, the global economy, and emerging technologies;
5. Enhance their professional skills by means of continuous education and professional development; and
6. Demonstrate professional and ethical responsibility towards their profession, society and the environment, as well as respect for diversity.

[Bachelor of Science in Computer Science](https://www.ue.edu.ph/mla/p/curriculum.php?c=CCS2023) (BSCS)

The Bachelor of Science in Computer Science program emphasizes comprehension of the principles and concepts needed for designing and formulating new systems and applications. It encourages the inquisitive pursuit and investigation of new ideas and developments to prepare the student for a subsequent Master’s degree program. It is assured that students entering this degree program have higher level mathematical foundations for abstract algebra, mathematical logic, calculus, discrete mathematics, and statistics.

***The program must enable students to attain, by the time of graduation:***  
A. Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.  
B. Identify, analyze, formulate, research literature, and solve complex computing problems and requirements reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines  
C. An ability to apply mathematical foundations, algorithmic principles and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices  
D. Knowledge and understanding of information security issues in relation to the design, development and use of information systems  
E. Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.  
F. Create, select, adapt and apply appropriate techniques, resources and modern computing tools to complex computing activities, with an understanding of the limitations to accomplish a common goal  
G. Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings  
H. Communicate effectively with the computing community and with society at large about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions  
I. An ability to recognize the legal, social, ethical and professional issues involved in the utilization of computer technology and be guided by the adoption of appropriate professional, ethical and legal practices  
J. Recognize the need and have the ability to engage in independent learning for continual development as a computing professional.

[Bachelor of Science in Information System](https://www.ue.edu.ph/mla/p/curriculum.php?c=CBSIS2023) (BSIS)

The Bachelor of Science in Information Systems program aims to prepare the student to become an IT professional and to have mastery on the design and implementation of Information Technology and Systems as applied solutions for business processes.

**PROGRAM OUTCOMES (from CMO)**

The program must enable students to attain, by the time of graduation:

1. An ability to apply knowledge of business processes, computing, mathematics and social sciences appropriate to Information Systems.
2. An ability to analyze a problem, identify and define the computing requirements with respect to organizational factors appropriate to its solution and plan strategies for their solution.
3. An ability to evaluate information systems in terms of general quality attributes and possible trade-offs presented within the given requirement.
4. An ability to design, implement, and evaluate information systems, processes, components, or programs and to source cost-benefit efficient alternatives to meet desired needs, goals and constraints.
5. Use knowledge and understanding of enterprises in modeling and design of information systems.
6. Deploy and use effective skills, tools and techniques necessary for information systems practice.
7. Function effectively on teams (recognizing the different roles within a team and different ways to organizing teams) to accomplish a common goal.
8. Communicate effectively with a range of audiences. Communication skills include technical writing, presentation and negotiation, and numeracy.
9. Recognize the legal, social, ethical and professional issues involved in the exploitation of computer technology and be guided by the adoption of appropriate professional, ethical and legal practices both in the local and global community.
10. Recognize the need for and engage in independent and life-long learning, planning self-learning and improving performance as the foundation for on-going professional development.

**PROGRAM EDUCATIONAL OBJECTIVES (IS)**

Graduates of the program, within a few years after graduation, will be expected to:

1. Pursue a successful career as computing professionals, utilizing the knowledge acquired in the program;
2. Maintain high professionalism and ethical standards as individuals or member of a team, in solving multidisciplinary projects related to Information Systems problems;
3. Demonstrate effective oral and written communication skills to collaborate with persons in various information systems roles, including those in the role of user, manager, developer, analyst, and database/network administrator;
4. Demonstrate good breadth of knowledge in planning, leading, organizing, and participating in teams and team-based projects, that guides organizations to successful and sustainable information-system-based solutions;
5. Enhance their professional skills by means of continuous education and professional development; and
6. Demonstrate professional and ethical responsibility towards their profession, society, and the environment, as well as respect for diversity.

###### [**Bachelor of Science in Entertainment and Multimedia Computing**](https://www.ue.edu.ph/mla/p/curriculum.php?c=CBSEMC2023)(BSEMC)

With specialization in Digital Animation  
The Bachelor of Science in Entertainment and Multimedia Computing (BSEMC) program, with specialization in Digital Animation, aims to prepare students to be digital animation professionals, who are equipped with creative and technical knowledge, skills and values in conceptualizing, designing, and producing animation products and solutions, and in managing such projects over different technology platforms.

###### [**Bachelor of Science in Entertainment and Multimedia Computing**](https://www.ue.edu.ph/mla/p/curriculum.php?c=CBSEMCG2023)(**BSEMCG**)

With specialization in Game Development  
The Bachelor of Science in Entertainment and Multimedia Computing (BSEMCG) program, with specialization n Game development professionals, who are equipped with creative and technical knowledge, skills and values in conceptualizing, designing, and producing digital games and tools, and in managing such projects over different technology platforms.

###### [**Bachelor of Science in Data Science**](https://www.ue.edu.ph/mla/p/curriculum.php?c=CBSDS2023)**(BSDS)**

The BSDS program includes the study of data and the methodologies, processes, algorithms, and systems for collecting, refining, storing, and analyzing data to arrive at useful insights and knowledge. Data Science is a discipline in computing that benefits from developments in computer science, mathematics, statistics, business, and other disciplines.