



2023 CURRICULUM FOR BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCpE)

IMPORTANT : REGISTRATION IN ANY COURSE WITHOUT ALL THE PREREQUISITES, CORRECT SEQUENCE AND AUTHORIZED LOAD SHALL NOT BE GIVEN ANY CREDIT REGARDLESS OF THE GRADE OBTAINED. EVALUATION IS TENTATIVE AND MAY BE REVISED FOR SOME VALID CAUSES OR REASONS OR IF OMISSIONS AND/OR LACK OF UNITS CREDITED BE DISCOVERED LATER.

Student's Name and Signature							
COURSE CODE	DESCRIPTIVE TITLE			Lecture Hours			PREREQUISITE(S)
				Laboratory Hours	Credit Units		
FIRST YEAR, FIRST SEMESTER (20 UNITS)							
CHM	001	Chemistry for Engineers	3	3	4		
MATH	141	Calculus 1	4	0	4		
MATH	025	Discrete Mathematics	3	0	3		
CPE	101	Computer Engineering as a Discipline	1	0	1		
CPE	102	Programming Logic and Design	0	6	2		
CPE	103	Computer System Administration and Troubleshooting	0	3	1		
GEC	001	Understanding the Self	3	0	3		
PE	001	Physical Activities Toward Health & Fitness 1 (PATHFit 1)	2	0	2		
NSTP	001	National Service Training Program 1	(3)	0	(3)		
FIRST YEAR, SECOND SEMESTER (22 UNITS)							
PHYS	111	Calculus-Based Physics	3	3	4	MATH 141 (P)	
MATH	242	Calculus 2	4	0	4	MATH 141 (P)	
MATH	022B	Linear Algebra with MATLAB	2	3	3	MATH 141 (P), MATH 025 (P)	
GEE	001B	GE Elective 1 - Gender and Society	3	0	3		
MATH	027C	Engineering Data Analysis 1	3	0	3	MATH 141 (P)	
CPE	104	Computer-Aided Drafting	0	3	1		
CPE	105	Object-Oriented Programming	0	6	2	CPE 102 (P)	
PE	002	Physical Activities Toward Health & Fitness 2 (PATHFit 2)	2	0	2	PE 001 (P)	
NSTP	002	National Service Training Program 2	(3)	0	(3)	NSTP 001 (P)	
SECOND YEAR, FIRST SEMESTER (25 UNITS)							
IE	321	Engineering Data Analysis 2	0	3	1	MATH 027C (P)	
MATH	021	Differential Equations	3	0	3	MATH 242 (P)	
CPE	200	Data Structures and Algorithms	0	6	2	CPE 105 (P)	
GEC	006	Art Appreciation	3	0	3		
GEE	003C	GE Elective 3 - The Entrepreneurial Mind	3	0	3		
CPE	106	Data and Digital Communications	3	0	3	PHYS 111 (P)	
ECE	201A	Fundamentals of Electronic Circuits	3	3	4	PHYS 111 (P)	
EE	200D	Fundamentals of Electrical Circuits	3	3	4	PHYS 111 (P)	
PE	003	Physical Activities Toward Health & Fitness 3 (PATHFit 3)	2	0	2	PE 002 (P)	
SECOND YEAR, SECOND SEMESTER (25 UNITS)							
MATH	026B	Numerical Methods	3	0	3	MATH 021 (P), MATH 022B (P)	
CPE	202	Database Management System	0	6	2	CPE 200 (P)	
CPE	203	Logic Circuits and Design	3	3	4	ECE 201A (P), EE 200D (P)	
CPE	204	Computer Engineering Drafting and Design	0	3	1	ECE 201A (P), EE 200D (P)	
CPE	206	Computer Networks 1	2	3	3	CPE 103 (P)	
CPE	300	Optimization Techniques	3	0	3	MATH 021 (P)	
GEC	007	Science, Technology and Society	3	0	3		
		Cognate/Elective Course 1	2	3	3	See track for pre-requisite(s)	
CPE	408A	Emerging Technologies 1 in CpE	0	3	1	2nd year standing	
PE	004	Physical Activities Toward Health & Fitness 4 (PATHFit 4)	2	0	2	PE 003 (P)	
THIRD YEAR, FIRST SEMESTER (26 UNITS)							
CPE	313A	Computer Organization with Assembly Language	1	3	2	CPE 203 (P)	
CPE	306	Computer Networks 2	2	3	3	CPE 206 (P)	
ECE	309A	Feedback and Control Systems	3	0	3	MATH 026B (P)	
CPE	408B	Emerging Technologies 2 in CpE	0	3	1	CPE 408A (P)	
		Cognate/Elective Course 2	2	3	3	See track for pre-requisite(s)	
CPE	316	Introduction to HDL	0	3	1	CPE 203 (P)	
CPE	308	CpE Laws and Professional Practice	2	0	2	3rd year standing (P)	
CPE	205A	Software Design 1	2	0	2	CPE 202 (P)	
GEE	002B	GE Elective 2 - Living in the IT Era	3	0	3		
BOSH	101	Basic Occupational Health and Safety	3	0	3	3rd year standing (P)	
GEC	002	Readings in Philippine History	3	0	3		

THIRD YEAR, SECOND SEMESTER (25 UNITS)						
CPE	318	Computer System Performance Evaluation	0	3	1	IE 321 (P), CPE 313A (P)
CPE	313B	Computer Architecture	1	3	2	CPE 313A (P)
CPE	408C	Emerging Technologies 3 in CpE	0	3	1	CPE 408B (P)
CPE	405B	Microprocessor Systems	3	3	4	CPE 313A (P)
CPE	314	Computer Networks 3	2	3	3	CPE 306 (P)
CPE	205B	Software Design 2	1	3	2	CPE 205A (P)
CPE	317	Fundamentals of Mixed Signals and Sensors	3	0	3	ECE 201A (P)
		Cognate/Elective Course 3	2	3	3	See track for pre-requisite(s)
GEC	003	The Contemporary World	3	0	3	
GEC	008	Ethics	3	0	3	

NO STUDENT SHALL BE ALLOWED TO TAKE FOURTH YEAR PROFESSIONAL COURSES UNLESS HE HAS COMPLETED THE BASIC AND THE THIRD YEAR COURSES INCLUDING PE AND NSTP.

COURSE CODE	DESCRIPTIVE TITLE	Lecture Hours			Laboratory Hours			CREDIT UNITS	PREREQUISITE(S)

THIRD YEAR, SUMMER (8 UNITS)						
CPE	309	Methods of Research	2	0	2	COE 030 (C), CPE 405B (P)
CPE	409	Seminars and Field Trips	0	3	1	3rd year standing (P)
COE	302	Introduction to Intellectual Property	0	3	1	3rd year standing (P)
CPE	311A	Operating Systems	2	3	3	CPE 313A (P)
COE	030	Sustainable Development Engineering	1	0	1	CPE 309 (C)

FOURTH YEAR, FIRST SEMESTER (26 UNITS)						
CPE	400	Embedded Systems	3	3	4	CPE 405B (P)
CPE	416	Digital Signal Processing and Application	3	3	4	MATH 026B (P)
CPE	415	Developing Applications and Automation	2	3	3	CPE 314 (P)
CPE	412	CpE Design 1	2	3	3	CPE 309 (P)
GEM	001	Life and Works of Rizal	3	0	3	
ME	304A	Engineering Economics	3	0	3	
GEC	005	Purposive Communication	3	0	3	
CPE	304A	Project Management	3	0	3	4th Year Standing (P)

FOURTH YEAR, SECOND SEMESTER (12 UNITS)						
CPE	413	CpE Design 2	1	6	3	Graduating (P)
CPE	414	On-the-Job Training for CpE	3	240	3	Graduating (P)
GEC	004	Mathematics in the Modern World	3	0	3	
TECH	101A	Technology Entrepreneurship	3	0	3	Graduating (P)

ELECTIVE COURSES

NOTE: A STUDENT MAY CHOOSE ANY OF THE TRACK ELECTIVES BELOW AND ONCE A TRACK ELECTIVE IS CHOSEN, ALL COURSES IN THE TRACK MUST BE TAKEN.

Track 1: Systems Administration						
CPE	207A	Advanced System Administration	2	3	3	CPE 206 (C)
CPE	307B	Automating Server Management	2	3	3	CPE 207A (P)
CPE	312B	Cloud Management and Security	2	3	3	CPE 307B (P)
Track 2: Cybersecurity						
CPE	209	Fundamentals of Cybersecurity	2	3	3	CPE 206 (C)
CPE	320	Computer Security Management	2	3	3	CPE 209 (P)
CPE	315	Forensics of Cybersecurity	2	3	3	CPE 320 (P)
Track 3: Cyber-Physical Systems						
CPE	331B	Internet of Things	2	3	3	CPE 203 (C)
CPE	332B	Machine Perception and Robotics	2	3	3	CPE 331B (P)
CPE	343C	Intelligent System Design	2	3	3	CPE 332B (P)
Track 4: Data Science						
COE	003	Computational Thinking with Python	2	3	3	CPE 200 (P)
COE	004A	Predictive Analytics using Machine Learning	2	3	3	COE 003 (P)
COE	005A	Advanced Machine Learning and Deep Learning	2	3	3	COE 004A (P)
Track 5: Railway Engineering						
RWE	001	Introduction to Railway Systems and Engineering	3	0	3	
RWE	002A	Railway Management, Governance and Operations	3	0	3	RWE 001 (P)
RWE	003A	Advanced Topic on Railway Engineering	3	0	3	RWE 002A (P)

TOTAL NO. OF UNITS 195

CREDENTIALS SUBMITTED:

DEFICIENCY/IES

Evaluated by: _____

Date: _____

() F138 () PSA Birth Certificate

() GMC () Transfer Credential

() F137A () TOR

Received by: _____

Date: _____