


TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES
Quezon City
2018 CURRICULUM FOR BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCPE)

IMPORTANT: Registration in any course/s without all the pre-requisite/s, correct sequence and authorized load shall not be given any credit regardless of the grade/s obtained.

NAME : _____ STUDENT NO : _____

COURSE CODE		DESCRIPTIVE TITLE	LEC HOURS	LAB HOURS	CREDIT UNITS	PRE-REQUISITE(S)/CO-REQUISITE(S)
FIRST YEAR, FIRST SEMESTER (20 UNITS)						
MATH	016	Calculus 1	3	0	3	
MATH	006	Discrete Mathematics	3	0	3	
CHEM	001C	Chemistry for Engineers	3	3	4	
CPE	008	Computer Engineering as a Discipline	1	0	1	
CPE	007	Programming Logic and Design	0	6	2	
CPE	201A	Computer System Administration and Troubleshooting	0	3	1	
CPE	003	Computer-Aided Drafting	0	3	1	
GEC	001	Understanding the Self	3	0	3	
PE	001	Physical Education 1	2	0	2	
NSTP	001	National Service Training Program 1	(3)	0	(3)	
TOTAL			15	15	20	
FIRST YEAR, SECOND SEMESTER (24 UNITS)						
MATH	017	Calculus 2	3	0	3	MATH 016(P)
MATH	013	Linear Algebra with MATLAB	2	3	3	MATH 006(P) MATH 016(P)
MATH	019A	Engineering Data Analysis	3	3	4	MATH 006(P) MATH 016(P)
PHYS	001C	Calculus-Based Physics	3	3	4	MATH 016(P)
CPE	009	Object Oriented Programming	0	6	2	CPE 007(P)
GEE	001	General Education Elective 1	3	0	3	
GEC	004	Mathematics in the Modern World	3	0	3	
PE	002	Physical Education 2	2	0	2	PE 001(P)
NSTP	002	National Service Training Program 2	(3)	0	(3)	NSTP 001(P)
TOTAL			19	15	24	
SECOND YEAR, FIRST SEMESTER (26 UNITS)						
MATH	010	Differential Equations	3	0	3	MATH 017(P)
ECE	027	Fundamentals of Electronic Circuits	3	3	4	PHYS 001C(P)
EE	041	Fundamentals of Electrical Circuits	3	3	4	PHYS 001C(P)
CPE	010	Data Structures and Algorithms	0	6	2	CPE 009(P) MATH 006(P)
CPE	011	Database Management System	0	6	2	CPE 009(P)
TECH	101	Introduction to Engineering Entrepreneurship	3	0	3	
EECO	001	Engineering Economics	3	0	3	2nd Year Standing
CPE	012	Data and Digital Communications	3	0	3	ECE 027(C)
PE	003	Physical Education 3	2	0	2	PE 002(P)
TOTAL			20	18	26	
SECOND YEAR, SECOND SEMESTER (26 UNITS)						
MATH	020	Numerical Methods	3	0	3	MATH 010(P) MATH 013(P)
CPE	013	Logic Circuits and Design	3	3	4	ECE 027(P) EE 041(P)
CPE	304	Computer Engineering Drafting and Design	0	3	1	ECE 027(P) EE 041(P)
CPE	014	Embedded Systems	3	3	4	CPE 013(C)
CPE	302	Computer Networks 1	2	3	3	CPE 012(P) CPE 201A(P)
CPE Elective	1	Cognate / Elective Course 1	2	3	3	See track for pre-requisite(s)
GEC	006	Art Appreciation	3	0	3	
PE	004	Physical Education 4	2	0	2	PE 003(P)
GEE	002	General Education Elective 2	3	0	3	
TOTAL			21	15	26	
THIRD YEAR, FIRST SEMESTER (23 UNITS)						
CPE	015	Optimization Techniques	3	0	3	MATH 019A(P) MATH 020(P)



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CPE	016	Introduction to HDL	0	3	1	CPE 013(P) CPE 014(P)
ECE	028	Feedback and Control Systems	3	0	3	MATH 020(P)
CPE	017	Fundamentals of Mixed Signals and Sensors	3	0	3	CPE 013(P) CPE 304(P)
CPE	401	Computer Networks 2	2	3	3	CPE 302(P)
CPE Elective	2	Cognate / Elective Course 2	2	3	3	See track for pre-requisite(s)
GEC	003	The Contemporary World	3	0	3	3rd Year Standing
SOCSC	005	Life and Works of Rizal	3	0	3	3rd Year Standing
CPE	018	Emerging Technologies 1 in CpE	0	3	1	3rd Year Standing
TOTAL			19	12	23	
THIRD YEAR, SECOND SEMESTER (22 UNITS)						
CPE	020	Methods of Research	2	0	2	CPE 015(P)
CPE	021	Computer Architecture and Organization	3	3	4	CPE 016(P)
CPE	022	Operating Systems	3	0	3	CPE 021(C)
CPE Elective	3	Cognate / Elective Course 3	2	3	3	See track for pre-requisite(s)
CPE	404	Computer Networks 3	2	3	3	CPE 401(P)
COE	002A	Introduction to Intellectual Property	0	3	1	3rd Year Standing
GEC	007	Science, Technology, and Society	3	0	3	3rd Year Standing
CPE	019	Emerging Technologies 2 in CpE	0	3	1	CPE 018(P)
CPE	023	CpE Laws and Professional Practice	2	0	2	3rd Year Standing
TOTAL			17	15	22	
THIRD YEAR, SUMMER (9 UNITS)						
CPE	024	Basic Occupational Health and Safety	3	0	3	3rd Year Standing
GEC	002	Readings in Philippine History	3	0	3	3rd Year Standing
GEC	008	Ethics	3	0	3	3rd Year Standing
TOTAL			9	0	9	
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 COURSES.						
FOURTH YEAR, FIRST SEMESTER (26 UNITS)						
CPE	026	Emerging Technologies 3 in CpE	0	3	1	CPE 019(P)
CPE	006	Microprocessor Systems	3	3	4	CPE 021(P)
CPE	025	Software Design	3	3	4	CPE 022(P)
CPE	027	Digital Signal Processing and Application	3	3	4	ECE 028(P) MATH 019A(P)
GEE	003	General Education Elective 3	3	0	3	4th Year Standing
CPE	028	Developing Applications and Automation	2	3	3	CPE 404(P)
CPE	029	CpE Design Project 1	2	3	3	COE 002A(P) CPE 006(C) CPE 020(P)
CPE	502	Plant Visits and Seminars for CPE	0	3	1	4th Year Standing
GEC	005	Purposive Communication	3	0	3	4th Year Standing
TOTAL			19	21	26	
FOURTH YEAR, SECOND SEMESTER (6 UNITS)						
CPE	030	CpE Design Project 2	1	6	3	Graduating
CPE	500	On-the-Job- Training for CpE	3	240	3	Graduating
TOTAL			4	246	6	
ELECTIVE COURSES						
Track 1: Intelligent Systems						
CPE	101	Internet of Things	2	3	3	CPE 014(C) CPE 302(C)
CPE	102	Machine Perception	2	3	3	CPE 101(P)
CPE	103	Robotics and Automation	2	3	3	CPE 102(P)
TOTAL			6	9	9	
Track 2: Systems Administration						
CPE	231	Systems Administration Fundamentals	2	3	3	CPE 010(P) CPE 011(P)
CPE	232	Managing Enterprise Servers	2	3	3	CPE 231(P)
CPE	243	Enterprise Security	2	3	3	CPE 232(P)
TOTAL			6	9	9	



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Track 3: Data Science							
CPE	311	Computational Thinking with Python	2	3	3	CPE 010(P) MATH 013(P) MATH 019A(P)	
CPE	312	Predictive Analytics using Machine Learning	2	3	3	CPE 311(P)	
CPE	313	Advanced Machine Learning and Deep Learning	2	3	3	CPE 312(P)	
TOTAL			6	9	9		
Track 4: Technopreneurship							
TECH	102	Technopreneurship 2	3	0	3	TECH 101(P)	
TECH	103	Technopreneurship 3	3	0	3	TECH 102(P)	
TECH	104	Technopreneurship 4	3	0	3	TECH 103(P)	
TOTAL			9	0	9		
Track 5: Railway Engineering							
RWE	001	Introduction to Railway Systems and Engineering	3	0	3		
RWE	002	Railway Management, Governance, and Operations	3	0	3	RWE 001(P)	
RWE	003	Advanced Topic on Railway Engineering	3	0	3	RWE 002(P)	
TOTAL			9	0	9		

CREDENTIALS PRESENTED:

- () F137A () NSO Birth Certificate
- () F138 () HD
- () GMC () TOR

DEFICIENCY/IES:

Evaluated By: _____

Date: _____

Received By: _____

Date: _____

LEGEND

P = Pre-requisite

C = Co-requisite

NOTE: 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.