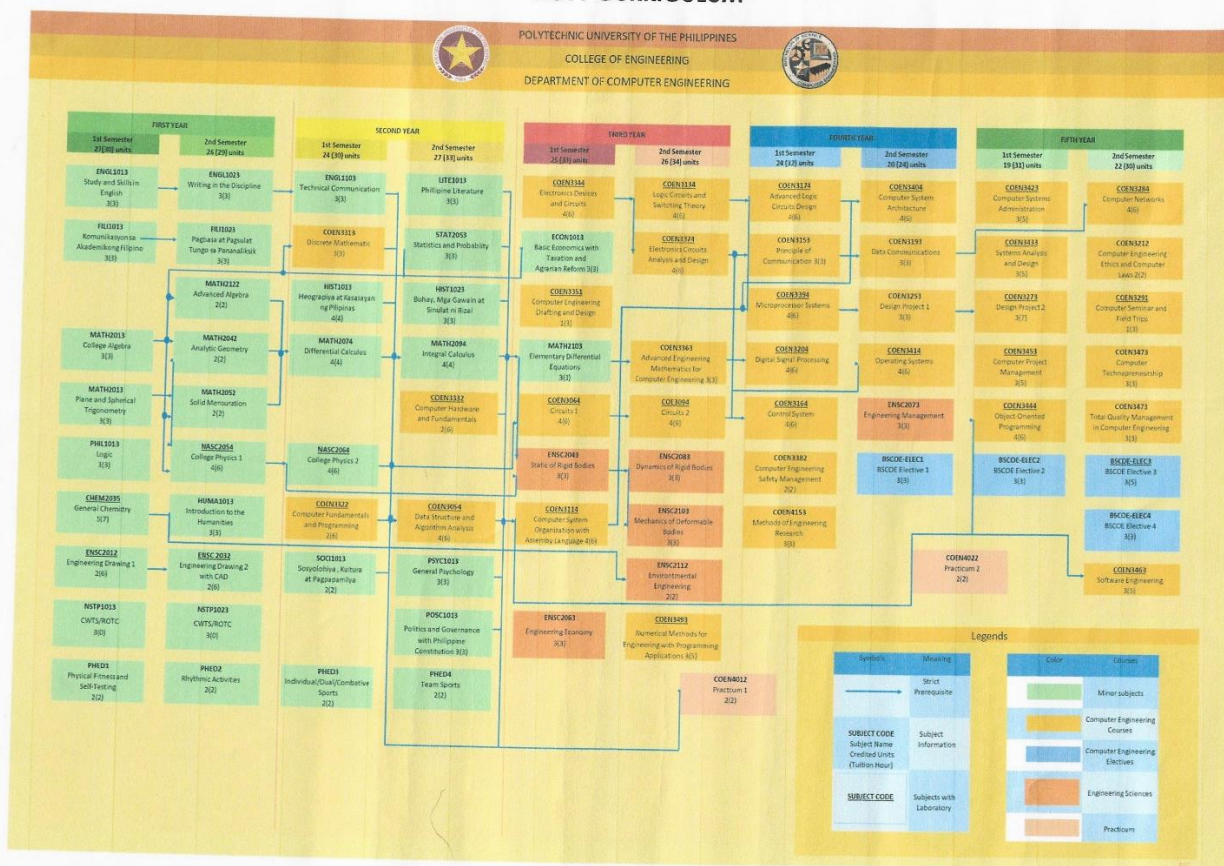




POLYTECHNIC UNIVERSITY OF THE PHILIPPINES COLLEGE OF ENGINEERING COMPUTER ENGINEERING DEPARTMENT

Bachelor of Science in Computer Engineering 2011 CURRICULUM



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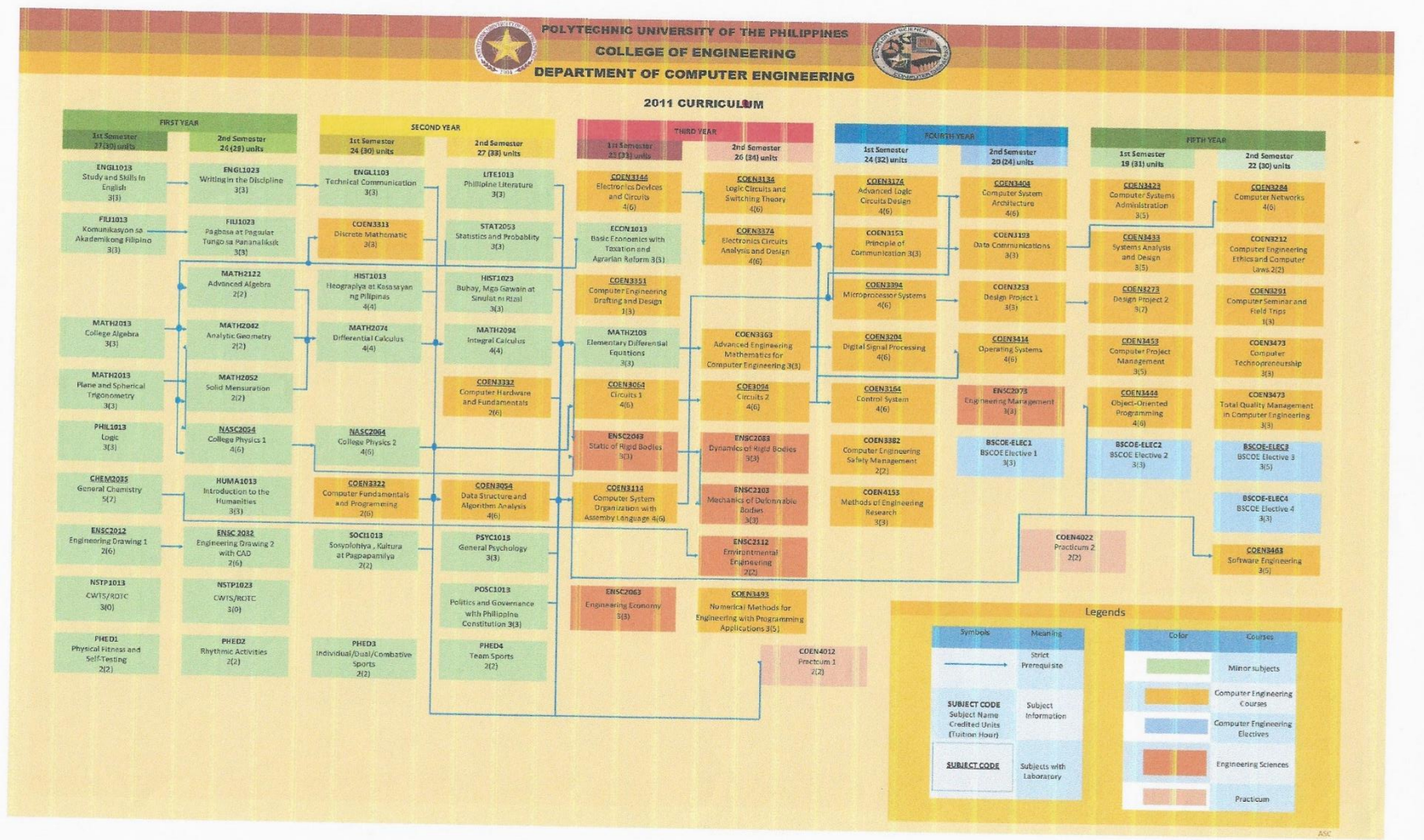


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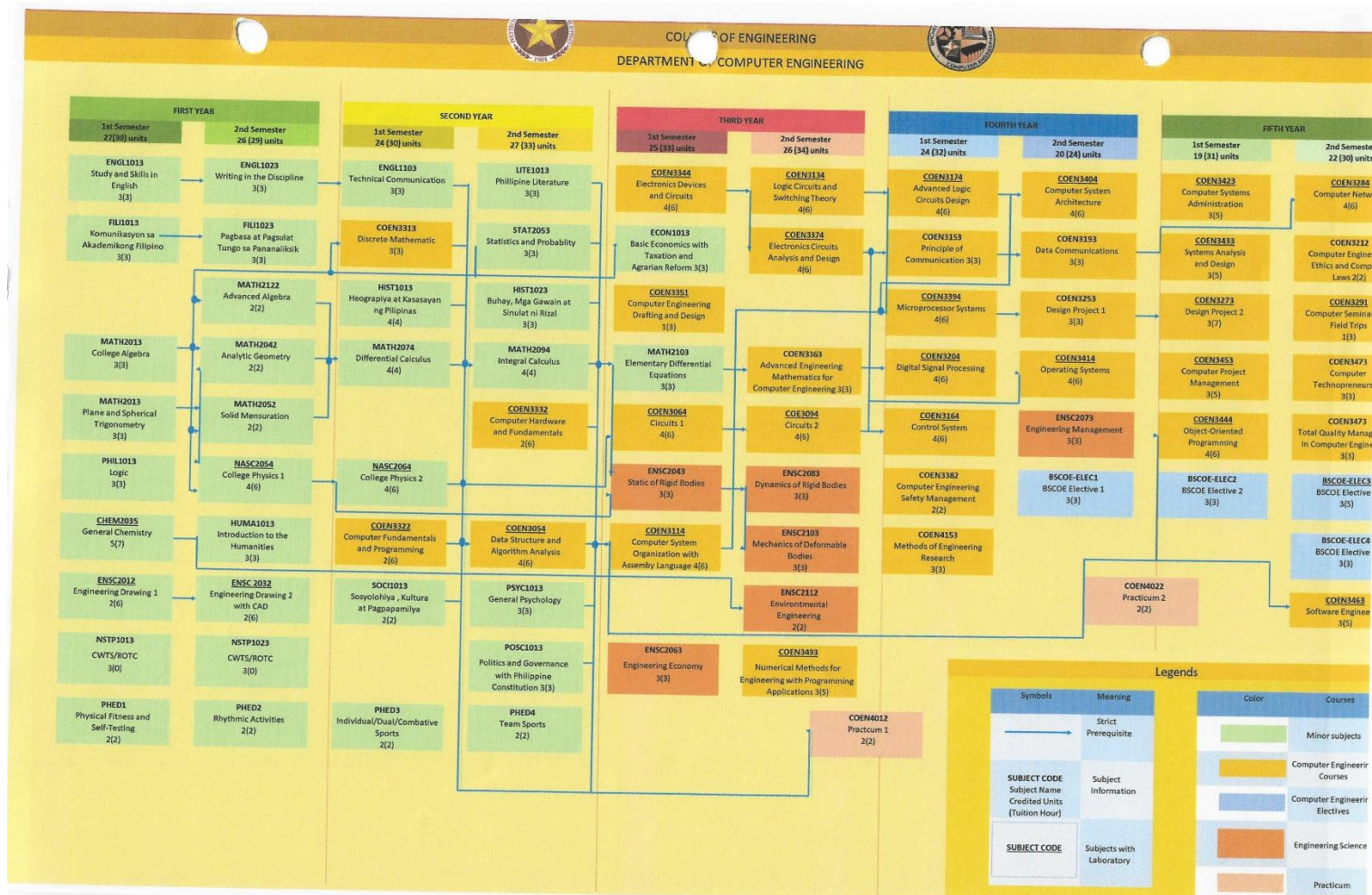


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POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
COLLEGE OF ENGINEERING
COMPUTER ENGINEERING DEPARTMENT

CURRICULUM OF
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCPE)
(Revised 2018 - 2019)

First Year
First Semester

Subject Code	Prerequisite	Description	Units
MATH 20043		Calculus 1	3
CHEM 20024		Chemistry for Engineers	4
CMPE 30011		Computer Engineering as a Discipline	1
CMPE 40012		Computer Engineering Technology 1	2
NSTP 10013		CWTS/ROTC	3
GEED 10053		Mathematics in the Modern World	3
PHED 01		Physical Education 1	2
CMPE 30022		Programming Logic and Design	2
GEED 10083		Science, Technology and Society	3
GEED 10023		Understanding the Self	3

Second Semester

Subject Code	Prerequisite	Description	Units
MATH 20053	MATH 20043	Calculus 2	3
CMPE 40022		Computer Engineering Technology 2	2
NSTP 10023		CWTS/ROTC	3
CMPE 30043	GEED 10053	Discrete Mathematics	3
STAT 20023	GEED 10053	Engineering Data Analysis	3
CMPE 30032	CMPE 30022	Object-oriented Programming	2
PHED 02		Physical Education 2	2
PHYS 20034	MATH 20043	Physics for Engineers	4
GEED 10063		Purposive Communication	3

Second Year
First Semester

Subject Code	Prerequisite	Description	Units
GEED 10073		Art Appreciation	3
GEED 10013		Buhay at Mga Simulat ni Rizal	3
CMPE 40032		Computer Engineering Technology 3	2
CMPE 30052	CMPE 30032	Data Structures and Algorithms	2
MATH 20063	MATH 20053	Differential Equations	3
GEED 10103		Filipinohiya at Pambansang Kaunlaran	3
ELEN 20044	MATH 20053	Fundamentals of Electrical Circuits	4
PHED 03		Physical Education 3	2
GEED 20023		Politics, Governance and Citizenship	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 40042		Computer Engineering Technology 4	2
ENSC 20011		Computer-Aided Drafting	1
ECEN 20034	ELEN 20044	Fundamentals of Electronic Circuits	4
CMPE 30063	MATH 20063	Numerical Methods	3
GEED 10113	GEED 10103	Pagsasalin sa Kontekstong Filipino	3
PHED 04		Physical Education 4	2
GEED 10033		Readings in Philippine History	3
CMPE 30074	CMPE 30032	Software Design	4
GEED 10043		The Contemporary World	3

Summer Semester

Subject Code	Prerequisite	Description	Units
CMPE 30083		On The Job Training (OJT) 1	3

Third Year
First Semester

Subject Code	Prerequisite	Description	Units
CMPE 30141	ECEN 20034	Computer Engineering Drafting and Design	1
CMPE 40062		Computer Engineering Technology 5	2
CMPE 30114	ECEN 20034	Data and Digital Communications	4
ENSC 20093		Engineering Economics	3
CMPE 30133	CMPE 30063, ELEN 20044	Feedback and Control Systems	3
CMPE 30153	ECEN 20034	Fundamentals of Mixed Signals and Sensors	3
GEED 20033		Gender and Society	3
CMPE 30123	CMPE 30022, ECEN 20034	Introduction to Hardware Description Language (HDL)	1
CMPE 30094	ECEN 20034	Logic Circuits and Design	4
CMPE 30103	CMPE 30052	Operating Systems	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 30163		Basic Occupational Health and Safety	3
CMPE 30202		Computer Engineering Laws and Professional Practice	2
CMPE 30174	CMPE 30114	Computer Networks and Security	4
CMPE-E1		CpE Elective 1	3
CMPE 30193	STAT 20023, CMPE 30184, GEED 10063	Methods of Research	3
CMPE 30184	CMPE 30094	Microprocessors	4
GEED 10133		Panitikang Filipino	3
ENSC 20103		Technopreneurship 101	3



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 COLLEGE OF ENGINEERING
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Summer Semester

Subject Code	Prerequisite	Description	Units
CMPE-E2		CpE Elective 2	3
CMPE 30213		On The Job Training (OJT) 2	3

Fourth Year
 First Semester

Subject Code	Prerequisite	Description	Units
CMPE 30224	CMPE 30184	Computer Architecture and Organization	4
CMPE 30231	CMPE 30184, CMPE 30193	Computer Engineering Practice and Design 1	1
CMPE-E3		CpE Elective 3	3
CMPE 30244		Digital Signal Processing	4
GEED 10093		Ethics	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 30252	CMPE 30231	Computer Engineering Practice and Design 2	2
CMPE-E4		CpE Elective 4	3
CMPE 30274	CMPE 30184	Embedded Systems	4
CMPE 30283		Emerging Technologies in Computer Engineering	3
CMPE 30261		Field Study and Seminars	1
GEED 20093		Reading Visual Arts	3



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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First Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2013	College Algebra	3	None
MATH 2033	Plane & Spherical Trigonometry	3	None
CHEM 2035	General Chemistry	5	None
ENSC 2012	Engineering Drawing 1	2	None
ENGL 1013	Study and Thinking Skills in English	3	None
FILI 1013	Komunikasyonsa Akademikong Filipino	3	None
PHIL 1013	Logic	3	None
PHED 1	Physical Education 1	2	None
NSTP 1013	CWTS 1/ROTC 1	3	None
Total		27	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2122	Advanced Algebra	2	College Algebra
MATH 2042	Analytic Geometry	2	College Algebra, Plane & Spherical Trigonometry
MATH 2052	Solid Mensuration	2	College Algebra, Plane & Spherical Trigonometry
NASC 2054	College Physics 1	4	College Algebra, Plane & Spherical Trigonometry
ENSC 2032	Engineering Drawing 2 with CAD	2	Engineering Drawing 1
ENGL 1023	Writing in Discipline	3	Study and Thinking Skills in English
FILI 1023	Pagbasa at Pagsulat Tungosa Pananaliksik	3	Komunikasyonsa Akademikong Filipino
HUMA 1013	Introduction to the Humanities	3	None
PHED 2	Physical Education 2	2	None
NSTP 1023	CWTS 2/ROTC 2	3	None
Total		26	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Second Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2074	Differential Calculus	4	Advanced Algebra, Analytic Geometry, Solid Mensuration
NASC 2064	College Physics 2	4	College Physics 1
COEN 3313	Discrete Mathematics	3	College Algebra
ENGL 1103	Technical Communication	3	Writing in Discipline
HIST 1013	Heograpiya At Kasaysayan ng Pilipinas	3	None
SOCI 1013	Sosyolohiya, Kultura at Pagpapamilya	3	None
COEN 3322	Computer Fundamentals and Programming	2	None
PHED 3	Physical Education 3	2	None
Total		24	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2094	Integral Calculus	4	Differential Calculus
STAT 2053	Statistics and Probability	3	College Algebra
COEN 3332	Computer Hardware and Fundamentals	2	None
LITE 1013	Philippine Literature	3	None
POSC1013	Politics and Governance with Philippine Constitution	3	None
HIST 1023	Buhay, Mga Gawain at Sinulatni Rizal	3	None
COEN 3054	Data Structures and Algorithm Analysis	4	Computer Fundamentals and Programming
PSYC 1013	General Psychology	3	None
PHED4	Physical Education 4	2	None
Total		27	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT

Third Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
ECON 1013	Basic Economics with Taxation and Agrarian Reform	3	College Algebra
COEN 3064	Circuits 1	4	Integral Calculus, College Physics 2
COEN 3351	Computer Engineering Drafting and Design	1	None
ENSC 2043	Static of Rigid Bodies	3	Integral Calculus, College Physics 1
COEN 3114	Computer System Organization with Assembly Language	4	Data Structures and Algorithm Analysis
COEN 3344	Electronics Devices and Circuits	4	None
MATH 2103	Elementary Differential Equations	3	Integral Calculus
ENSC 2063	Engineering Economy	3	None
Total		25	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 3094	Circuits 2	4	Circuits 1
ENSC 2083	Dynamics of Rigid Bodies	3	Static of Rigid Bodies
ENSC 2112	Environmental Engineering	2	General Chemistry
COEN 3374	Electronics Circuits Analysis and Design	4	Electronics Devices and Circuits
COEN 3134	Logic Circuits and Switching Theory	4	Electronics Devices and Circuits
ENSC 2103	Mechanics of Deformable Bodies	3	Static of Rigid Bodies
COEN 3363	Advanced Engineering Mathematics for Computer Engineering	3	Elementary Differential Equations
COEN 3493	Numerical Methods for Engineering with Programming Applications	3	None
Total		26	

Summer Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 4012	Practicum 1 (On-the-Job training 300 hours)	2	
Total		2	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Fourth Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 3174	Advanced Logic Circuits Design	4	Logic Circuits and Switching Theory
COEN 3382	Computer Engineering Safety Management	2	None
COEN 3164	Control System	4	Circuits 2, Electronics Circuits Analysis and Design
COEN 3204	Digital Signal Processing	4	Advanced Engineering Mathematics for Computer Engineering
COEN 4153	Methods of Engineering Research	3	None
COEN 3394	Microprocessor Systems	4	Logic Circuits and Switching Theory, Computer System Organization with Assembly Language
COEN 3153	Principle of Communication	3	Circuits 2, Electronics Circuits Analysis and Design
Total		24	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC1	BSCOE ELECTIVE 1	3	None
COEN 3404	Computer Systems Architecture	4	Advanced Logic Circuits Design, Computer System Organization with Assembly Language
COEN 3193	Data Communications	3	Principle of Communication
COEN 3253	Design Project 1	3	Microprocessor Systems
ENSC 2073	Engineering Management	3	None
COEN 3414	Operating Systems	4	Computer System Organization with Assembly Language
Total		20	

Summer Semester

Code	Subject Description	Prerequisite/Co-requisite
COEN 4022	Practicum 2 (On-the-Job training 300 hours)	Practicum 1
Total		



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Fifth Year
 First semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC2	BSCOE ELECTIVE 2	3	None
COEN 3453	Computer Project Management	3	None
COEN 3423	Computer Systems Administration	3	None
COEN 3273	Design Project 2	3	Design Project 1
COEN 3444	Object Oriented Programming	4	Data Structures and Algorithm Analysis
COEN 3433	Systems Analysis and Design	3	None
Total		19	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC3	BSCOE ELECTIVE 3	3	None
BSCOE-ELEC4	BSCOE ELECTIVE 4	3	None
COEN 3212	Computer Engineering Ethics and Computer Laws	2	None
COEN 3284	Computer Networks	4	Data Communications
COEN 3291	Computer Seminar and Field Trips	1	None
COEN 3473	Computer Technopreneurship	3	None
COEN 3463	Software Engineering	3	Data Structures and Algorithm Analysis
COEN 3483	Total Quality Management in Computer Engineering	3	None
Total		22	



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Comparison between CMO 13 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

A. Mathematics	Minimum No of Hours / Week (1 unit-3 hrs)		Minimum credits units	A. Mathematics	Minimum No of Hours / Week (1 unit-3 hrs)		Minimum credits units	CHED	PUP
	LEC	LAB			CREDIT Units	LEC			
	3	0	3	MATH 2013 – College Algebra	3	0	3		
	2	0	2	MATH 2122 – Advance Algebra	2	0	2		
	3	0	3	MATH 2033 – Plane & Spherical Trigonometry	3	0	3		
	2	0	2	MATH 2042 – Analytic Geometry	2	0	2		
	2	0	2	MATH 2052 – Solid Mensuration	2	0	2		
	2	0	2	MATH 2074 – Differential Calculus	4	0	4		
	4	0	4	MATH 2094 – Integral Calculus	3	0	3		
Differential Equation	3	0	3	MATH 2103 – Elementary Differential Equation	3	0	3		
Probability statistics	3	0	3	STAT 2053 – Statistics and Probability					
TOTAL	26	0	26	TOTAL	26	0	26		

B. Natural/ Physical Sciences	LEC	LAB	CREDIT Units	B. Basic Engineering Sciences	LEC	LAB	CREDIT Units	CHED	PUP
	2	0	2	NASC 2054 – College Physics 1	3	3	4		
	3	0	3	NASC 2064 – College Physics 2	3	3	4		
TOTAL	9	9	12	TOTAL	10	9	13		With additional 1 lec hr



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Comparison between CMO 13 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

C. Basic Engineering Sciences	LEC	LAB	CREDIT Units
Engineering Drawing	0	3	1
Computer Aided Drafting	0	3	1
Computer Fundamentals and Programming	0	6	2
Static of Rigid Bodies	3	0	3
Dynamics of Rigid Bodies	2	0	2
Mechanics of Deformable Bodies	3	0	3
Engineering Economy	3	0	3
Environmental Engineering	2	0	2
Safety Management	1	0	1
TOTAL	17	12	21

C. Basic Engineering Sciences	LEC	LAB	CREDIT Units
ENSC 2012 – Engineering Drawing 1	0	6	2
ENSC 2032 – Engineering Drawing 2 with CAD	0	6	2
COEN 3322 – Computer Fundamentals and Programming	0	6	2
ENSC 2043 – Static of Rigid Bodies	3	0	3
ENSC 2083 – Dynamics of Rigid Bodies	2	0	2
ENSC 2103 – Mechanics of Deformable Bodies	3	0	3
ENSC 2063 – Engineering Economy	3	0	3
ENSC – Environmental Engineering	2	0	2
ENSC – Safety Management	2	0	2
TOTAL	18	18	24

CHED	PUP
w/ add 3 lab hrs.	
w/ add 3 lab hrs.	

D. Allied Courses	LEC	LAB	CREDIT Units
Circuits 1	3	3	4
Circuits 2	3	3	4
Entrepreneurship	3	0	3
Electronic Circuits Analysis and Design	3	3	4
Electronics Devices and Circuits	3	3	4

D. Allied Courses	LEC	LAB	CREDIT Units
COEN 3064 - Circuits 1	3	3	4
COEN 3094 – Circuits 2	3	3	4
COEN 3473 – Computer Entrepreneurship	3	0	3
COEN 3374 Electronic Circuits Analysis and Design	3	3	4
COEN 3334 – Electronics Devices and Circuits	3	3	4

CHED	PUP



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C. Allied Courses	LEC	LAB	CREDIT Units	C. Basic Engineering Sciences	LEC	LAB	CREDIT Units	CHED	PUP
Circuits 1	3	3	4	COEN 3064 - Circuits 1	3	3	4		
Circuits 2	3	3	4	COEN 3094 - Circuits 2	3	3	4		
Entrepreneurship	3	0	3	COEN 3473 - Computer Technopreneurship	3	0	3		
Electronic Circuits Analysis and Design	3	3	4	COEN 3374 - Electronic Circuits Analysis and Design	3	3	4		
Electronics Devices and Circuits	3	3	4	COEN 3334 - Electronics Devices and Circuits	3	3	4		
TOTAL	15	12	19	TOTAL	15	12	19		
Engineering Economy	3	0	3	ENSC 2063 - Engineering Economy	3	0	3		
Environmental Engineering	2	0	2	ENSC - Environmental Engineering	2	0	2		
Safety Management	1	0	1	ENSC - Safety Management	2	0	2		
TOTAL	17	12	21	TOTAL	18	18	24		



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Comparison between CMO 13 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

E. Professional Courses	LEC	LAB	CREDIT Units	D. Allied Courses	LEC	LAB	CREDIT Units	CHED	PUP
Advanced Engineering Mathematics for CPE	3	0	3	COEN 3353 – Advanced Engineering Mathematics for CoE	3	0	3		
Discrete Mathematics	3	0	3	COEN 3313 – Discrete Mathematics	3	0	3		
Computer Engineering Drafting and Design	0	3	1	COEN 3341 – Computer Engineering Drafting and Design	0	3	1		
Control System	3	3	4	COEN 3164 - Control Systems	3	3	4		
Computer System Architecture	3	3	4	COEN 3404 – Computer System Architecture	3	3	4		
Computer System Organization with Assembly Language	3	3	4	COEN 3114 – Computer System Organization With Assembly Language	3	3	4		
Principle of Communication	3	0	3	COEN 3153 – Principles of Communication	3	0	3		
Data Communications	3	0	3	COEN 3193 - Data Communication	2	3	3		
Computer Networks	3	3	4	COEN 3284 – Computer Networks	3	3	4		
Data Structures and Algorithm Analysis	3	3	4	COEN 3054 – Data Structures and Algorithm Analysis	3	3	4	With add 1 lec hr Lacks 3 lab hrs.	Connected w/ add 3 lab hrs
Operating Systems	3	3	4	COEN 3414 – Operating Systems	3	3	4		
System Analysis and Design	2	3	3	COEN 3433 – System Analysis Design	2	3	3		
Engineering Ethics and Computer Laws	2	0	2	COEN 3212 – Engineering Ethics and Computer Laws	2	0	2		
Computer Hardware Fundamentals	0	3	1	COEN 3332 – Computer Hardware Fundamentals	0	6	2		
Advanced Logic Circuit	3	3	4	COEN 3174 – Advanced Logic Circuits	3	3	4		
Logic Circuits and Switching Theory	3	3	4	COEN 3134 – Logics Circuits and Switching Theory					



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Comparison between CMO 13 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

Subjects	LEC	LAB	CREDIT Units	Subjects	LEC	LAB	CREDIT Units	CHED	PUP
Digital Signal Processing	3	3	4	COEN 3204 – Digital Signal Processing	3	3	4		
Object Oriented Programming	2	3	3	COEN 3444 – Object Oriented Programming	3	3	4	With additional 1 lec	
Microprocessor System	3	3	4	COEN 3394 – Microprocessor System	3	3	4		
Design Project 1 (Methods of Research)	2	0	2	COEN 3253 – Design Project 1	3	0	3		
				COEN 4073 – Fundamentals of Research	2	3	3		
Design Project 1 (Project Implementation)	0	6	2	COEN 3273 – Design Project 2	1	6	3		
Software Engineering	3	0	3	COEN 3463 – Software Engineering	2	3	3		
Seminars and Field Trips	0	3	1	COEN 3291 – Computer Seminars and Fieldtrips	0	3	1		
Environmental Engineering	2	0	2	COEN 3363 – Numerical Methods for Engineering with Programming Application	2	3	3	Additional course, not in the minute	
Safety Management	1	0	1	COEN – Safety Engineering (Computer)	2	0	2	Additional course, not in the minute	Split subject of envi.
				COEN 3423 – Computer System Administration	2	3	3	Additional course, not in the minute	
				COEN 3453 – Computer Project Management	3	0	3	Additional course, not in the minute	
				MANA 2053 – Total Quality Management	3	0	3	Additional course, not in the minute	



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F. Technical Electives	LEC	LAB	CREDIT Units
Elective 1	0	0	3
Elective 2	0	0	3
Elective 3	0	0	3
TOTAL	0	0	9
On-the Job Training		240	

F. Technical Electives	LEC	LAB	CREDIT Units
Elective 1 (4 th year – 2 nd Semester)	2	3	3
Elective 2 (5 th year – 1 st Semester)	2	3	3
Elective 3 (5 th year – 2 nd Semester)	2	3	3
Elective 4 (5 th year – 2 nd Semester)	2	3	3
TOTAL	8	12	12
COEN 4012 – Practicum 1 (Computer Engineering Allied Services Office work not less than 250 hours of training)			2
COEN 4022 – Practicum 2 (Computer Engineering Allied Service office work not less than 250 hours of training)			2
TOTAL	18	18	24

CHED	PUP

II. NON-TECHNICAL COURSES			
A. Social Sciences	LEC	LAB	Credits Units
Social Science 1	3	0	3
Social Science 2	3	0	3
Social Science 3	3	0	3
Social Science 4	3	0	3
TOTAL	12	0	12

II. NON-TECHNICAL COURSES			
A. Social Sciences	LEC	LAB	Credit Units
HIST 1013 – Heograpiya at kasaysayan ng pilipinas	3	0	3
SOCI 1013 – Sosyolohiya, Kultura at Pagpapamilya	3	0	3
PSYC 1013 – General Psychology	3	0	3
POSC 1013 – Politics, Governance with PH constitution	3	0	3
TOTAL	15	0	15

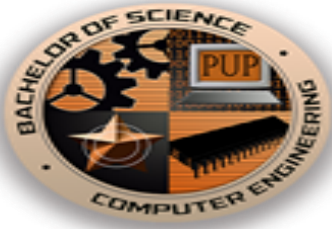
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COMPUTER ENGINEERING DEPARTMENT**

Comparison between CMO 13 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

	Minimum No of Hours / Week (1 unit-3 hrs)		Minimum credits units		Minimum No of Hours / Week (1 unit-3 hrs)		Minimum credits units	CHED	PUP
	LEC	LAB	CREDIT Units		LEC	LAB	CREDIT Units		
B. Humanities				B. Humanities					
Humanities 1	3	0	3	HUMA 1013-Introduction to Humanities	3	0	3		
Humanities 2	3	0	3	LITE 1013 – Philippine Literature	3	0	3		
Humanities 3	3	0	3	PHIL 1013- LOGIC	3	0	3		
TOTAL	9	0	9	TOTAL	9	0	9		
				MATH 2052 – Solid Mensuration	2	0	2		
C. Languages	Lec	Lab	Credits Units	C. Languages	Lec	Lab	Credits Units	CHED	PUP
English 1	3	0	3	ENG 1013- Study and Thinking Skill in English	3	0	3		
English 2	3	0	3	ENGL 1023- Writing in the Discipline	3	0	3		
English 3 (Technical Communication)	3	0	3	ENGL Technical Communication	3	0	3		
Filipino 1	3	0	3	FIL 1013- Komunikasyon sa Akademikong	3	0	3		
Filipino 2	3	0	3	FIL 1023- Pagbasa at Pagsulat tungo sa Pananaliksik	3	0	3		
	15	0	15		15	0	15		
D. Mandated Courses	Lec	Lab	Credits units	II NON- TECHNICAL COURSES	LEC	LAB	Credits Units	CHED	PUP
P.E 1			2	PHED 1012 –Physical Fitness	0	0	2		
P.E 2			2	PHED 1022 – Rythmic Activities	0	0	2		
P.E 3			2	PHED 1032 – Individual/Dual/Combative	0	0	2		
TOTAL			6	PHED 1042 –Team Sports	0	0	2		
				TOTAL	0	0	8		



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
COLLEGE OF ENGINEERING
COMPUTER ENGINEERING DEPARTMENT**

Comparison between CMO 13 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

	Minimum No of Hours / Week (1 unit-3 hrs)		Minimum credits units
	LEC	LAB	CREDIT Units
F. Nationals Service Training Service Program			
NSTP 1	0	0	3
NSTP 2	0	0	3
TOTAL	0	0	6
GRAND TOTAL	156	84	210

	Minimum No of Hours / Week (1 unit-3 hrs)		Minimum credits units
	LEC	LAB	CREDIT Units
F. Nationals Service Training service Program			
NSTP 1013 – CWTS/ ROTC 1	0	0	3
NSTP 1023 – CWTS/ ROTC 2	0	0	3
	0	0	6
	188	114	245

CHED	PUP

Comparison Summary	CMO 29 S. 2007	PUP -CE	DIFFERENCE in %
Mathematic	26	26	100
Natural/ Physical Sciences	12	13	106.3
Basic Engineering Sciences	21	24	114.3
Allied Courses	19	19	100
Professional Courses	70	91	130
Elective Courses	9	12	133.3
OJT 240 hts		4	
Social Sciences	12	15	125
Humanities	9	9	
Languages	15	15	100

CHED	PUP



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT**

Comparison between CMO 13 P5 for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

Comparison Summart	CMO 29 S.2007	PUP -CE	Differen ce in %
Mandated Courses	3	3	100
P.E	8	8	100
NSTP	6	6	100
	210	245	116.7

CHED	PUP

16.7 % higher than CHED minimum required units



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT**

Comparison between CMO 17 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

I. TECHNICAL COURSES	Minimum No of Hours / Week (1 unit- 3 hrs)		Minimum credits units
	LEC	LAB	
A. Mathematics			CREDIT Units
Calculus 1	3	0	3
Calculus 2	3	0	3
Engineering Data Analysis	3	0	3
Differential Equations	3	0	3
TOTAL	26	0	26
B. Natural/ Physical Sciences	LEC	LAB	
Chemistry For Engineers	3	3	4
Physics For Engineers	3	3	4
TOTAL	6	6	8
C. Basic Engineering Sciences	LEC	LAB	CREDIT Units
Computer Aided Drafting	0	3	1
Engineering Economics	3	0	3
Technopreneurship 101	3	0	3
TOTAL	6	3	7

	Minimum No of Hours / Week (1 unit- 3 hrs)		Minimum credits units
	LEC	LAB	
A. Mathematics			CREDIT Units
MATH 20043– Calculus 1	3	0	3
MATH 20053– Calculus 2	3	0	3
STAT 20023 – Engineering Data Analysis	3	0	3
MATH 20063– Differential Equations	3	0	3
TOTAL	26	0	26
B. Basic Engineering Sciences	LEC	LAB	CREDIT Units
CHEM 20024 – Chemistry For Engineers	2	2	4
PHYS 20034 – Physics For Engineers	2	2	4
TOTAL	4	4	8
C. Basic Engineering Sciences	LEC	LAB	CREDIT Units
ENSC 20011 - Computer Aided Drafting	0	1	1
ENSC 20093 - Engineering Economics	3	0	3
ENSC 20103 - Technopreneurship 101	3	0	3
TOTAL	6	1	7

CHED	PUP
	Less 1 unit for Lec & Lab
	Less 1 unit for Lec & Lab
	Less 2 unit for lab



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT**

Comparison between CMO 17 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

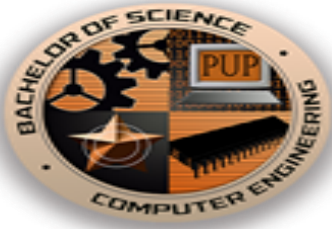
E. Professional Courses	Minimum No of Hours / Week (1 unit- 3 hrs)		Minimum credits units	E. Professional Courses	Minimum No of Hours / Week (1 unit- 3 hrs)		Minimum credits units	CHED	PUP
	LEC	LAB			CREDIT Units	LEC			
Discrete Mathematics	3	0	3	CVPE 30043 - Discrete Mathematics	3	0	3		
Numerical Methods	3	0	3	CVPE 30063 - Numerical Methods	3	0	3		
Computer Engineering As a Discipline	1	0	1	CVPE 30011 - Computer Engineering As a Discipline	1	0	1		
Fundamentals of Mixed Signals and Sensors	3	0	3	CVPE 30153 - Fundamentals of Mixed Signals and Sensors	3	0	3		
Computer Engineering Drafting and Design	0	3	1	CVPE 30141 - Computer Engineering Drafting and Design	0	3	1		
Programming Logic and Design	0	6	2	CVPE 30022 - Programming Logic and Design	0	6	2		
Data Structures and Algorithms	0	6	2	CVPE 30052 - Data Structures and Algorithms	0	6	2		
Object Oriented Programming	0	6	2	CVPE 30032 - Object Oriented Programming	0	6	2		
Software Design	3	3	4	CVPE 30074 - Software Design	3	3	4		
Microprocessors	3	3	4	CVPE 30184 - Microprocessors	3	3	4		
Logic Circuits and Design	3	3	4	CVPE 30094 - Logic Circuits and Design	3	3	4		
Methods of Research	2	0	2	CVPE 30193 - Methods of Research	2	0	2		
Operating Systems	3	0	3	CVPE 30103 - Operating Systems	3	0	3		
Computer Architecture and Organizations	3	3	4	CVPE 30224 - Computer Architecture and Organizations	3	3	4		
Data and Digital Communications	3	0	3	CVPE 30114 - Data and Digital Communications	3	0	3		
Computer Networks and Security	3	3	4	CVPE 30174 - Computer Networks and Security	3	3	4		
Embedded Systems	3	3	4	CVPE 30274 - Embedded Systems	3	3	4		



**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Comparison between CMO 17 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

				CHED	PUP	
Understanding The Self	3	0	3			
Art Appreciation	3	0	3			
Purposive Communication	3	0	3			
Mathematics for the Modern World	3	0	3			
Ethics	3	0	3			
TOTAL	24	0	24			
B. Gen Electives/ Mandated Courses			CREDIT Units			
GEC Elective 1	3	0	3			
GEC Elective 2	3	0	3			
GEC Elective 3	3	0	3			
Life and Works of Rizal	3	0	3			
Total	12	0	12			
C. Physical Education						
PE 1	2	0	2			
PE 2	2	0	2			
PE 3	2	0	2			
PE 4	2	0	2			
Total	8	0	8			
D. National Service Training Program						
NSTP 1	3	0	3			
GEED 10023 - Understanding The Self				3	C	3
GEED 10073 - Art Appreciation				3	C	3
GEED 10063 - Purposive Communication				3	C	3
GEED 10053 - Mathematics for the Modern World				3	C	3
GEED 10093 - Ethics				3	C	3
TOTAL				24	C	24
B. Gen Electives/ Mandated Courses						CREDIT Units
CMPE-E1 - GEC Elective 1				3	C	3
CMPE-E2 - GEC Elective 2				3	C	3
CMPE-E23 - GEC Elective 3				3	C	3
GEED 10013 - Life and Works of Rizal				3	C	3
Total				12	C	12
C. Physical Education						
PHED 10012 - PE 1				2	C	2
PHED 10022 - PE 2				2	C	2
PHED 10032 - PE 3				2	C	2
PHED 10042 - PE 4				2	C	2
Total				8	C	8
D. National Service Training Program						
NSTP 10013 - NSTP 1				3	C	3



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Comparison between CMO 17 PS for Computer Engineering and Proposed Revision of the curriculum for BS CpE program of Polytechnic University of the Philippines, Manila

								CHED	PUP
NSTP 2	3	0	3	NSTP 10023 - NSTP 2	3	0	3		
Total	5	0	6	Total	6	0	6		



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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CURRICULUM OF
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCPE)
(Revised 2018 - 2019)

First Year
First Semester

Subject Code	Prerequisite	Description	Units
MATH 20043		Calculus 1	3
CHEM 20024		Chemistry for Engineers	4
CMPE 30011		Computer Engineering as a Discipline	1
CMPE 40012		Computer Engineering Technology 1	2
NSTP 10013		CWTS/ROTC	3
GEED 10053		Mathematics in the Modern World	3
PHED 01		Physical Education 1	2
CMPE 30022		Programming Logic and Design	2
GEED 10083		Science, Technology and Society	3
GEED 10023		Understanding the Self	3

Second Semester

Subject Code	Prerequisite	Description	Units
MATH 20053	MATH 20043	Calculus 2	3
CMPE 40022		Computer Engineering Technology 2	2
NSTP 10023		CWTS/ROTC	3
CMPE 30043	GEED 10053	Discrete Mathematics	3
STAT 20023	GEED 10053	Engineering Data Analysis	3
CMPE 30032	CMPE 30022	Object-oriented Programming	2
PHED 02		Physical Education 2	2
PHYS 20034	MATH 20043	Physics for Engineers	4
GEED 10063		Purposive Communication	3

Second Year
First Semester

Subject Code	Prerequisite	Description	Units
GEED 10073		Art Appreciation	3
GEED 10013		Buhay at Mga Sinulat ni Rizal	3
CMPE 40032		Computer Engineering Technology 3	2
CMPE 30052	CMPE 30032	Data Structures and Algorithms	2
MATH 20063	MATH 20053	Differential Equations	3
GEED 10103		Filipinolohiya at Pambansang Kaunlaran	3
ELEN 20044	MATH 20053	Fundamentals of Electrical Circuits	4
PHED 03		Physical Education 3	2
GEED 20023		Politics, Governance and Citizenship	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 40042		Computer Engineering Technology 4	2
ENSC 20011		Computer-Aided Drafting	1
ECEN 20034	ELEN 20044	Fundamentals of Electronic Circuits	4
CMPE 30063	MATH 20063	Numerical Methods	3
GEED 10113	GEED 10103	Pagsasalín sa Kontekstong Filipino	3
PHED 04		Physical Education 4	2
GEED 10033		Readings in Philippine History	3
CMPE 30074	CMPE 30032	Software Design	4
GEED 10043		The Contemporary World	3

Summer Semester

Subject Code	Prerequisite	Description	Units
CMPE 30083		On The Job Training (OJT) 1	3

Third Year
First Semester

Subject Code	Prerequisite	Description	Units
CMPE 30141	ECEN 20034	Computer Engineering Drafting and Design	1
CMPE 40062		Computer Engineering Technology 5	2
CMPE 30114	ECEN 20034	Data and Digital Communications	4
ENSC 20093		Engineering Economics	3
CMPE 30133	CMPE 30063, ELEN 20044	Feedback and Control Systems	3
CMPE 30153	ECEN 20034	Fundamentals of Mixed Signals and Sensors	3
GEED 20033		Gender and Society	3
CMPE 30121	CMPE 30022, ECEN 20034	Introduction to Hardware Description Language (HDL)	1
CMPE 30094	ECEN 20034	Logic Circuits and Design	4
CMPE 30103	CMPE 30052	Operating Systems	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 30163		Basic Occupational Health and Safety	3
CMPE 30202		Computer Engineering Laws and Professional Practice	2
CMPE 30174	CMPE 30114	Computer Networks and Security	4
CMPE-E1		CpE Elective 1	3
CMPE 30193	STAT 20023, CMPE 30184, GEED 10063	Methods of Research	3
CMPE 30184	CMPE 30094	Microprocessors	4
GEED 10133		Panitikang Filipino	3
ENSC 20103		Technopreneurship 101	3



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Summer Semester

Subject Code	Prerequisite	Description	Units
CMPE-E2		CpE Elective 2	3
CMPE 30213		On The Job Training (OJT) 2	3

Fourth Year
First Semester

Subject Code	Prerequisite	Description	Units
CMPE 30224	CMPE 30184	Computer Architecture and Organization	4
CMPE 30231	CMPE 30184, CMPE 30193	Computer Engineering Practice and Design 1	1
CMPE-E3		CpE Elective 3	3
CMPE 30244		Digital Signal Processing	4
GEED 10093		Ethics	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 30252	CMPE 30231	Computer Engineering Practice and Design 2	2
CMPE-E4		CpE Elective 4	3
CMPE 30274	CMPE 30184	Embedded Systems	4
CMPE 30283		Emerging Technologies in Computer Engineering	3
CMPE 30261		Field Study and Seminars	1
GEED 20093		Reading Visual Arts	3



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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First Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2013	College Algebra	3	None
MATH 2033	Plane & Spherical Trigonometry	3	None
CHEM 2035	General Chemistry	5	None
ENSC 2012	Engineering Drawing 1	2	None
ENGL 1013	Study and Thinking Skills in English	3	None
FILI 1013	Komunikasyonsa Akademikong Filipino	3	None
PHIL 1013	Logic	3	None
PHED 1	Physical Education 1	2	None
NSTP 1013	CWTS 1/ROTC 1	3	None
Total		27	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2122	Advanced Algebra	2	College Algebra
MATH 2042	Analytic Geometry	2	College Algebra, Plane & Spherical Trigonometry
MATH 2052	Solid Mensuration	2	College Algebra, Plane & Spherical Trigonometry
NASC 2054	College Physics 1	4	College Algebra, Plane & Spherical Trigonometry
ENSC 2032	Engineering Drawing 2 with CAD	2	Engineering Drawing 1
ENGL 1023	Writing in Discipline	3	Study and Thinking Skills in English
FILI 1023	Pagbasa at Pagsulat Tungosa Pananaliksik	3	Komunikasyonsa Akademikong Filipino
HUMA 1013	Introduction to the Humanities	3	None
PHED 2	Physical Education 2	2	None
NSTP 1023	CWTS 2/ROTC 2	3	None
Total		26	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT

Second Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2074	Differential Calculus	4	Advanced Algebra, Analytic Geometry, Solid Mensuration
NASC 2064	College Physics 2	4	College Physics 1
COEN 3313	Discrete Mathematics	3	College Algebra
ENGL 1103	Technical Communication	3	Writing in Discipline
HIST 1013	Heograpiya At Kasaysayan ng Pilipinas	3	None
SOCI 1013	Sosyolohiya, Kultura at Pagpapamilya	3	None
COEN 3322	Computer Fundamentals and Programming	2	None
PHED 3	Physical Education 3	2	None
Total		24	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2094	Integral Calculus	4	Differential Calculus
STAT 2053	Statistics and Probability	3	College Algebra
COEN 3332	Computer Hardware and Fundamentals	2	None
LITE 1013	Philippine Literature	3	None
POSC1013	Politics and Governance with Philippine Constitution	3	None
HIST 1023	Buhay, Mga Gawain at Sinulatni Rizal	3	None
COEN 3054	Data Structures and Algorithm Analysis	4	Computer Fundamentals and Programming
PSYC 1013	General Psychology	3	None
PHED4	Physical Education 4	2	None
Total		27	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT

Third Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
ECON 1013	Basic Economics with Taxation and Agrarian Reform	3	College Algebra
COEN 3064	Circuits 1	4	Integral Calculus, College Physics 2
COEN 3351	Computer Engineering Drafting and Design	1	None
ENSC 2043	Static of Rigid Bodies	3	Integral Calculus, College Physics 1
COEN 3114	Computer System Organization with Assembly Language	4	Data Structures and Algorithm Analysis
COEN 3344	Electronics Devices and Circuits	4	None
MATH 2103	Elementary Differential Equations	3	Integral Calculus
ENSC 2063	Engineering Economy	3	None
Total		25	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 3094	Circuits 2	4	Circuits 1
ENSC 2083	Dynamics of Rigid Bodies	3	Static of Rigid Bodies
ENSC 2112	Environmental Engineering	2	General Chemistry
COEN 3374	Electronics Circuits Analysis and Design	4	Electronics Devices and Circuits
COEN 3134	Logic Circuits and Switching Theory	4	Electronics Devices and Circuits
ENSC 2103	Mechanics of Deformable Bodies	3	Static of Rigid Bodies
COEN 3363	Advanced Engineering Mathematics for Computer Engineering	3	Elementary Differential Equations
COEN 3493	Numerical Methods for Engineering with Programming Applications	3	None
Total		26	

Summer Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 4012	Practicum 1 (On-the-Job training 300 hours)	2	
Total		2	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
 COLLEGE OF ENGINEERING
COMPUTER ENGINEERING DEPARTMENT

Third Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
ECON 1013	Basic Economics with Taxation and Agrarian Reform	3	College Algebra
COEN 3064	Circuits 1	4	Integral Calculus, College Physics 2
COEN 3351	Computer Engineering Drafting and Design	1	None
ENSC 2043	Static of Rigid Bodies	3	Integral Calculus, College Physics 1
COEN 3114	Computer System Organization with Assembly Language	4	Data Structures and Algorithm Analysis
COEN 3344	Electronics Devices and Circuits	4	None
MATH 2103	Elementary Differential Equations	3	Integral Calculus
ENSC 2063	Engineering Economy	3	None
Total		25	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 3094	Circuits 2	4	Circuits 1
ENSC 2083	Dynamics of Rigid Bodies	3	Static of Rigid Bodies
ENSC 2112	Environmental Engineering	2	General Chemistry
COEN 3374	Electronics Circuits Analysis and Design	4	Electronics Devices and Circuits
COEN 3134	Logic Circuits and Switching Theory	4	Electronics Devices and Circuits
ENSC 2103	Mechanics of Deformable Bodies	3	Static of Rigid Bodies
COEN 3363	Advanced Engineering Mathematics for Computer Engineering	3	Elementary Differential Equations
COEN 3493	Numerical Methods for Engineering with Programming Applications	3	None
Total		26	

Summer Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 4012	Practicum 1 (On-the-Job training 300 hours)	2	
Total		2	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT

Fourth Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 3174	Advanced Logic Circuits Design	4	Logic Circuits and Switching Theory
COEN 3382	Computer Engineering Safety Management	2	None
COEN 3164	Control System	4	Circuits 2, Electronics Circuits Analysis and Design
COEN 3204	Digital Signal Processing	4	Advanced Engineering Mathematics for Computer Engineering
COEN 4153	Methods of Engineering Research	3	None
COEN 3394	Microprocessor Systems	4	Logic Circuits and Switching Theory, Computer System Organization with Assembly Language
COEN 3153	Principle of Communication	3	Circuits 2, Electronics Circuits Analysis and Design
Total		24	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC1	BSCOE ELECTIVE 1	3	None
COEN 3404	Computer Systems Architecture	4	Advanced Logic Circuits Design, Computer System Organization with Assembly Language
COEN 3193	Data Communications	3	Principle of Communication
COEN 3253	Design Project 1	3	Microprocessor Systems
ENSC 2073	Engineering Management	3	None
COEN 3414	Operating Systems	4	Computer System Organization with Assembly Language
Total		20	

Summer Semester

Code	Subject Description	Prerequisite/Co-requisite
COEN 4022	Practicum 2 (On-the-Job training 300 hours)	Practicum 1
Total		



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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Fourth Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
COEN 3174	Advanced Logic Circuits Design	4	Logic Circuits and Switching Theory
COEN 3382	Computer Engineering Safety Management	2	None
COEN 3164	Control System	4	Circuits 2, Electronics Circuits Analysis and Design
COEN 3204	Digital Signal Processing	4	Advanced Engineering Mathematics for Computer Engineering
COEN 4153	Methods of Engineering Research	3	None
COEN 3394	Microprocessor Systems	4	Logic Circuits and Switching Theory, Computer System Organization with Assembly Language
COEN 3153	Principle of Communication	3	Circuits 2, Electronics Circuits Analysis and Design
Total		24	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC1	BSCOE ELECTIVE 1	3	None
COEN 3404	Computer Systems Architecture	4	Advanced Logic Circuits Design, Computer System Organization with Assembly Language
COEN 3193	Data Communications	3	Principle of Communication
COEN 3253	Design Project 1	3	Microprocessor Systems
ENSC 2073	Engineering Management	3	None
COEN 3414	Operating Systems	4	Computer System Organization with Assembly Language
Total		20	

Summer Semester

Code	Subject Description	Prerequisite/Co-requisite
COEN 4022	Practicum 2 (On-the-Job training 300 hours)	Practicum 1
Total		



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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COMPUTER ENGINEERING DEPARTMENT

Fifth Year
 First semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC2	BSCOE ELECTIVE 2	3	None
COEN 3453	Computer Project Management	3	None
COEN 3423	Computer Systems Administration	3	None
COEN 3273	Design Project 2	3	Design Project 1
COEN 3444	Object Oriented Programming	4	Data Structures and Algorithm Analysis
COEN 3433	Systems Analysis and Design	3	None
Total		19	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC3	BSCOE ELECTIVE 3	3	None
BSCOE-ELEC4	BSCOE ELECTIVE 4	3	None
COEN 3212	Computer Engineering Ethics and Computer Laws	2	None
COEN 3284	Computer Networks	4	Data Communications
COEN 3291	Computer Seminar and Field Trips	1	None
COEN 3473	Computer Technopreneurship	3	None
COEN 3463	Software Engineering	3	Data Structures and Algorithm Analysis
COEN 3483	Total Quality Management in Computer Engineering	3	None
Total		22	



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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I.2 The subjects are logically sequenced and prerequisite subject are identified.



POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
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CURRICULUM OF
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCPE)
(Revised 2018 - 2019)

First Year
First Semester

Subject Code	Prerequisite	Description	Units
MATH 20043		Calculus 1	3
CHEM 20024		Chemistry for Engineers	4
CMPE 30011		Computer Engineering as a Discipline	1
CMPE 40012		Computer Engineering Technology 1	2
NSTP 10013		CWTS/ROTC	3
GEED 10053		Mathematics in the Modern World	3
PHED 01		Physical Education 1	2
CMPE 30022		Programming Logic and Design	2
GEED 10083		Science, Technology and Society	3
GEED 10023		Understanding the Self	3

Second Semester

Subject Code	Prerequisite	Description	Units
MATH 20053	MATH 20043	Calculus 2	3
CMPE 40022		Computer Engineering Technology 2	2
NSTP 10023		CWTS/ROTC	3
CMPE 30043	GEED 10053	Discrete Mathematics	3
STAT 20023	GEED 10053	Engineering Data Analysis	3
CMPE 30032	CMPE 30022	Object-oriented Programming	2
PHED 02		Physical Education 2	2
PHYS 20034	MATH 20043	Physics for Engineers	4
GEED 10063		Purposive Communication	3

Second Year
First Semester

Subject Code	Prerequisite	Description	Units
GEED 10073		Art Appreciation	3
GEED 10013		Buhay at Mga Sinulat ni Rizal	3
CMPE 40032		Computer Engineering Technology 3	2
CMPE 30052	CMPE 30032	Data Structures and Algorithms	2
MATH 20063	MATH 20053	Differential Equations	3
GEED 10103		Filipinolohiya at Pambansang Kaunlaran	3
ELEN 20044	MATH 20053	Fundamentals of Electrical Circuits	4
PHED 03		Physical Education 3	2
GEED 20023		Politics, Governance and Citizenship	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 40042		Computer Engineering Technology 4	2
ENSC 20011		Computer-Aided Drafting	1
ECEN 20034	ELEN 20044	Fundamentals of Electronic Circuits	4
CMPE 30063	MATH 20063	Numerical Methods	3
GEED 10113	GEED 10103	Pagsasalain sa Kontekstong Filipino	3
PHED 04		Physical Education 4	2
GEED 10033		Readings in Philippine History	3
CMPE 30074	CMPE 30032	Software Design	4
GEED 10043		The Contemporary World	3

Summer Semester

Subject Code	Prerequisite	Description	Units
CMPE 30083		On The Job Training (OJT) 1	3

Third Year
First Semester

Subject Code	Prerequisite	Description	Units
CMPE 30141	ECEN 20034	Computer Engineering Drafting and Design	1
CMPE 40062		Computer Engineering Technology 5	2
CMPE 30114	ECEN 20034	Data and Digital Communications	4
ENSC 20093		Engineering Economics	3
CMPE 30133	CMPE 30063, ELEN 20044	Feedback and Control Systems	3
CMPE 30153	ECEN 20034	Fundamentals of Mixed Signals and Sensors	3
GEED 20033		Gender and Society	3
CMPE 30121	CMPE 30022, ECEN 20034	Introduction to Hardware Description Language (HDL)	1
CMPE 30094	ECEN 20034	Logic Circuits and Design	4
CMPE 30103	CMPE 30052	Operating Systems	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 30163		Basic Occupational Health and Safety	3
CMPE 30202		Computer Engineering Laws and Professional Practice	2
CMPE 30174	CMPE 30114	Computer Networks and Security	4
CMPE-E1		CpE Elective 1	3
CMPE 30193	STAT 20023, CMPE 30184, GEED 10063	Methods of Research	3
CMPE 30184	CMPE 30094	Microprocessors	4
GEED 10133		Panitikang Filipino	3
ENSC 20103		Technopreneurship 101	3



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Summer Semester

Subject Code	Prerequisite	Description	Units
CMPE-E2		CpE Elective 2	3
CMPE 30213		On The Job Training (OJT) 2	3

Fourth Year
 First Semester

Subject Code	Prerequisite	Description	Units
CMPE 30224	CMPE 30184	Computer Architecture and Organization	4
CMPE 30231	CMPE 30184, CMPE 30193	Computer Engineering Practice and Design 1	1
CMPE-E3		CpE Elective 3	3
CMPE 30244		Digital Signal Processing	4
GEED 10093		Ethics	3

Second Semester

Subject Code	Prerequisite	Description	Units
CMPE 30252	CMPE 30231	Computer Engineering Practice and Design 2	2
CMPE-E4		CpE Elective 4	3
CMPE 30274	CMPE 30184	Embedded Systems	4
CMPE 30283		Emerging Technologies in Computer Engineering	3
CMPE 30261		Field Study and Seminars	1
GEED 20093		Reading Visual Arts	3



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First Year
First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2013	College Algebra	3	None
MATH 2033	Plane & Spherical Trigonometry	3	None
CHEM 2035	General Chemistry	5	None
ENSC 2012	Engineering Drawing 1	2	None
ENGL 1013	Study and Thinking Skills in English	3	None
FILI 1013	Komunikasyonsa Akademikong Filipino	3	None
PHIL 1013	Logic	3	None
PHED 1	Physical Education 1	2	None
NSTP 1013	CWTS 1/ROTC 1	3	None
Total		27	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2122	Advanced Algebra	2	College Algebra
MATH 2042	Analytic Geometry	2	College Algebra, Plane & Spherical Trigonometry
MATH 2052	Solid Mensuration	2	College Algebra, Plane & Spherical Trigonometry
NASC 2054	College Physics 1	4	College Algebra, Plane & Spherical Trigonometry
ENSC 2032	Engineering Drawing 2 with CAD	2	Engineering Drawing 1
ENGL 1023	Writing in Discipline	3	Study and Thinking Skills in English
FILI 1023	Pagbasa at Pagsulat Tungosa Pananaliksik	3	Komunikasyonsa Akademikong Filipino
HUMA 1013	Introduction to the Humanities	3	None
PHED 2	Physical Education 2	2	None
NSTP 1023	CWTS 2/ROTC 2	3	None
Total		26	



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Second Year
 First Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2074	Differential Calculus	4	Advanced Algebra, Analytic Geometry, Solid Mensuration
NASC 2064	College Physics 2	4	College Physics 1
COEN 3313	Discrete Mathematics	3	College Algebra
ENGL 1103	Technical Communication	3	Writing in Discipline
HIST 1013	Heograpiya At Kasaysayan ng Pilipinas	3	None
SOCI 1013	Sosyolohiya, Kultura at Pagpapamilya	3	None
COEN 3322	Computer Fundamentals and Programming	2	None
PHED 3	Physical Education 3	2	None
Total		24	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
MATH 2094	Integral Calculus	4	Differential Calculus
STAT 2053	Statistics and Probability	3	College Algebra
COEN 3332	Computer Hardware and Fundamentals	2	None
LITE 1013	Philippine Literature	3	None
POSC1013	Politics and Governance with Philippine Constitution	3	None
HIST 1023	Buhay, Mga Gawain at Sinulatni Rizal	3	None
COEN 3054	Data Structures and Algorithm Analysis	4	Computer Fundamentals and Programming
PSYC 1013	General Psychology	3	None
PHED4	Physical Education 4	2	None
Total		27	



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Fifth Year
 First semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC2	BSCOE ELECTIVE 2	3	None
COEN 3453	Computer Project Management	3	None
COEN 3423	Computer Systems Administration	3	None
COEN 3273	Design Project 2	3	Design Project 1
COEN 3444	Object Oriented Programming	4	Data Structures and Algorithm Analysis
COEN 3433	Systems Analysis and Design	3	None
Total		19	

Second Semester

Code	Subject Description	Units	Prerequisite/Co-requisite
BSCOE-ELEC3	BSCOE ELECTIVE 3	3	None
BSCOE-ELEC4	BSCOE ELECTIVE 4	3	None
COEN 3212	Computer Engineering Ethics and Computer Laws	2	None
COEN 3284	Computer Networks	4	Data Communications
COEN 3291	Computer Seminar and Field Trips	1	None
COEN 3473	Computer Technopreneurship	3	None
COEN 3463	Software Engineering	3	Data Structures and Algorithm Analysis
COEN 3483	Total Quality Management in Computer Engineering	3	None
Total		22	



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First Year, First Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
MATH 2013	College Algebra	3	0	3	None
MATH 2033	Plane & Spherical Trigonometry	3	0	3	None
CHEM 2035	General Chemistry	4	3	5	None
ENSC 2012	Engineering Drawing 1	0	6	2	None
ENGL 1013	Study and Thinking Skills in English	3	0	3	None
FILI 1013	Komunikasyonsa Akademikong Filipino	3	0	3	None
PHIL 1013	Logic	3	0	3	None
PHED 1	Physical Education 1	2	0	2	None
NSTP 1013	CWTS 1/ROTC 1	3	0	3	None
Total		24	9	27	



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First Year, Second Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
MATH 2122	Advanced Algebra	2	0	2	College Algebra
MATH 2042	Analytic Geometry	2	0	2	College Algebra, Plane & Spherical Trigonometry
MATH 2052	Solid Mensuration	2	0	2	College Algebra, Plane & Spherical Trigonometry
NASC 2054	College Physics 1	3	3	4	College Algebra, Plane & Spherical Trigonometry
ENSC 2032	Engineering Drawing 2 with CAD	0	6	2	Engineering Drawing 1
ENGL 1023	Writing in Discipline	3	0	3	Study and Thinking Skills in English
FILI 1023	Pagbasa at Pagsulat Tungosa Pananaliksik	3	0	3	Komunikasyon sa Akademikong Filipino
HUMA 1013	Introduction to the Humanities	3	0	3	None
PHED 2	Physical Education 2	2	0	2	None
NSTP 1023	CWTS 2/ROTC 2	3	0	3	None
Total		21	9	26	



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NOTE: All incoming second year CPE students are required to take the engineering comprehensive examination
Second Year, First Semester

Code	Subject Description	No. of Hours		Units.	Prerequisite/Co-requisite
		Lec	Lab		
MATH 2074	Differential Calculus	4	0	4	Advanced Algebra, Analytic Geometry, Solid Mensuration
NASC 2064	College Physics 2	3	3	4	College Physics 1
COEN 3313	Discrete Mathematics	3	0	3	College Algebra
ENGL 1103	Technical Communication	3	0	3	Writing in Discipline
HIST 1013	Heograpiya At Kasaysayan ng Pilipinas	3	0	3	None
SOCI 1013	Sosyolohiya, Kultura at Pagpapamilya	3	0	3	None
COEN 3322	Computer Fundamentals and Programming	0	6	2	None
PHED 3	Physical Education 3	2	0	2	None
Total		19	9	24	



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Second Year, Second Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
MATH 2094	Integral Calculus	4	0	4	Differential Calculus
STAT 2053	Statistics and Probability	3	0	3	College Algebra
COEN 3332	Computer Hardware and Fundamentals	0	6	2	None
LITE 1013	Philippine Literature	3	0	3	None
POSC1013	Politics and Governance with Philippine Constitution	3	0	3	None
HIST 1023	Buhay, Mga Gawain at Sinulatni Rizal	3	0	3	None
COEN 3054	Data Structures and Algorithm Analysis	3	3	4	Computer Fundamentals and Programming
PSYC 1013	General Psychology	3	0	3	None
PHED4	Physical Education 4	2	0	2	None
Total		22	9	27	

NOTE: All incoming third year CPE students with a GWA of below 2.50 must take and pass the qualifying examination



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Third Year, First Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
ECON 1013	Basic Economics with Taxation and Agrarian Reform	3	0	3	College Algebra
COEN 3064	Circuits 1	3	3	4	Integral Calculus, College Physics 2
COEN 3351	Computer Engineering Drafting and Design	0	3	1	None
ENSC 2043	Static of Rigid Bodies	3	0	3	Integral Calculus, College Physics 1
COEN 3114	Computer System Organization with Assembly Language	3	3	4	Data Structures and Algorithm Analysis
COEN 3344	Electronics Devices and Circuits	3	3	4	None
MATH 2103	Elementary Differential Equations	3	0	3	Integral Calculus
ENSC 2063	Engineering Economy	3	0	3	None
Total		21	12	25	



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Third Year, Second Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
COEN 3094	Circuits 2	3	3	4	Circuits 1
ENSC 2083	Dynamics of Rigid Bodies	3	0	3	Static of Rigid Bodies
ENSC 2112	Environmental Engineering	2	0	2	General Chemistry
COEN 3374	Electronics Circuits Analysis and Design	3	3	4	Electronics Devices and Circuits
COEN 3134	Logic Circuits and Switching Theory	3	3	4	Electronics Devices and Circuits
ENSC 2103	Mechanics of Deformable Bodies	3	0	3	Static of Rigid Bodies
COEN 3363	Advanced Engineering Mathematics for Computer Engineering	3	0	3	Elementary Differential Equations
COEN 3493	Numerical Methods for Engineering with Programming Applications	2	3	3	None
Total		22	12	26	

Summer

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
COEN 4012	Practicum 1 (On-the-Job training 300 hours)	2	0	2	
Total		2	0	2	



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Fourth Year, First Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
COEN 3174	Advanced Logic Circuits Design	3	3	4	Logic Circuits and Switching Theory
COEN 3382	Computer Engineering Safety Management	2	0	2	None
COEN 3164	Control System	3	3	4	Circuits 2, Electronics Circuits Analysis and Design
COEN 3204	Digital Signal Processing	3	3	4	Advanced Engineering Mathematics for Computer Engineering
COEN 4153	Methods of Engineering Research	3	0	3	None
COEN 3394	Microprocessor Systems	3	3	4	Logic Circuits and Switching Theory, Computer System Organization with Assembly Language
COEN 3153	Principle of Communication	3	0	3	Circuits 2, Electronics Circuits Analysis and Design
Total		20	12	24	



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Fourth Year, Second Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
BSCOE-ELEC1	BSCOE ELECTIVE 1	3	0	3	None
COEN 3404	Computer Systems Architecture	3	3	4	Advanced Logic Circuits Design, Computer System Organization with Assembly Language
COEN 3193	Data Communications	3	0	3	Principle of Communication
COEN 3253	Design Project 1	3	0	3	Microprocessor Systems
ENSC 2073	Engineering Management	3	0	3	None
COEN 3414	Operating Systems	3	3	4	Computer System Organization with Assembly Language
Total		18	6	20	

Summer

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
COEN 4022	Practicum 2 (On-the-Job training 300 hours)	2	0	2	Practicum 1
Total		2	0	2	



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Fifth Year, First Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
BSCOE-ELEC2	BSCOE ELECTIVE 2	3	0	3	None
COEN 3453	Computer Project Management	2	3	3	None
COEN 3423	Computer Systems Administration	2	3	3	None
COEN 3273	Design Project 2	1	6	3	Design Project 1
COEN 3444	Object Oriented Programming	3	3	4	Data Structures and Algorithm Analysis
COEN 3433	Systems Analysis and Design	2	3	3	None
Total		13	18	19	



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Fifth Year, Second Semester

Code	Subject Description	No. of Hours		Units	Prerequisite/Co-requisite
		Lec	Lab		
BSCOE-ELEC3	BSCOE ELECTIVE 3	2	3	3	None
BSCOE-ELEC4	BSCOE ELECTIVE 4	3	0	3	None
COEN 3212	Computer Engineering Ethics and Computer Laws	2	0	2	None
COEN 3284	Computer Networks	3	3	4	Data Communications
COEN 3291	Computer Seminar and Field Trips	0	3	1	None
COEN 3473	Computer Technopreneurship	3	0	3	None
COEN 3463	Software Engineering	2	3	3	Data Structures and Algorithm Analysis
COEN 3483	Total Quality Management in Computer Engineering	3	0	3	None
Total		18	12	22	



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CURRICULUM OF
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCPE)
(Revised 2018 - 2019)

FIRST YEAR FIRST SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
GEED 10023	Understanding the Self		3	3	0
CMPE 30011	Computer Engineering as a Discipline		1	1	0
MATH 20043	Calculus 1		3	3	0
CHEM 20024	Chemistry for Engineers		4	3	3
CMPE 40012	Computer Engineering Technology 1		2	0	6
GEED 10053	Mathematics in the Modern World		3	3	0
CMPE 30022	Programming Logic and Design		2	0	6
PHED 10012	Physical Education 1		2	2	0
NSTP 10013	National Service Training Program 1		3	3	0
GEED 10083	Science, Technology and Society		3	3	0
		Totals	26	21	15



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FIRST YEAR SECOND SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30032	Object-oriented Programming	CMPE 30022	2	3	3
MATH 20053	Calculus 2	MATH 20043	3	3	0
PHYS 20034	Physics for Engineers	MATH 20043	4	3	3
STAT 20023	Engineering Data Analysis	GEED 10053	3	3	0
CMPE 30043	Discrete Mathematics	GEED 10053	3	3	0
GEED 10063	Purposive Communication		3	3	0
CMPE 40022	CpE Technology 2		2	0	6
PHED 10022	Physical Education 2		2	2	0
NSTP 10023	National Service Training Program 2		3	3	0
		Totals	25	23	12



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SECOND YEAR FIRST SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
GEED 10013	Buhay at MgaSinulatni Rizal		3	3	0
CMPE 40032	Computer Engineering Technology 3		2	0	6
CMPE 30052	Data Structures and Algorithms	CMPE 30032	2	0	6
MATH 20063	Differential Equations	MATH 20053	3	3	0
GEED 10103	Filipinolohiya at PambansangKaunlaran		3	3	0
ELEN 20044	Fundamentals of Electrical Circuits	MATH 20053	4	3	3
PHED 10032	Physical Education 3		2	2	0
GEED 20023	Politics, Governance and Citizenship		3	3	0
GEED 10073	Art Appreciation		3	3	0
		Totals	25	20	15



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SECOND YEAR SECOND SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30074	Software Design	CMPE 30032	4	3	3
ECEN 20034	Fundamentals of Electronic Circuits	ELEN 20044	4	3	3
GEED 10043	The Contemporary World		3	3	0
ENSC 20011	Computer-Aided Drafting		1	0	3
GEED 10123	Intelektwalisasyon ng Wikang Filipino	GEED 10103	3	3	0
CMPE 40042	CpE Technology 4		2	0	6
CMPE 30063	Numerical Methods	MATH 20063	3	3	0
GEED 10033	Readings in Philippine History		3	3	0
PHED 10042	Physical Education 4		2	2	0
		Totals	25	20	15

SECOND YEAR SUMMER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30083	On-the-Job Training 1 (300 hours)		3	1	6
		Totals	3	1	6



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THIRD YEAR FIRST SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30094	Logic Circuits and Design	ECEN 20034	4	3	3
CMPE 30103	Operating Systems	CMPE 30052	3	3	0
CMPE 30114	Data and Digital Communications	ECEN 20034	4	3	3
CMPE 30121	Introduction to Hardware Description Language (HDL)	CMPE 30022, ECEN 20034	1	0	3
CMPE 30133	Feedback and Control Systems	CMPE 30063, ELEN 20044	3	3	0
CMPE 30141	Computer Engineering Drafting and Design	ECEN 20034	1	0	3
CMPE 40052	CpE Technology 5		2	0	6
ENSC 20093	Engineering Economics		3	3	0
CMPE 30153	Fundamentals of Mixed Signals and Sensors	ECEN 20034	3	3	0
GEED 20033	Gender and Society		3	3	0
		Totals	27	21	18



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THIRD YEAR SECOND SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30163	Basic Occupational Health and Safety		3	3	0
CMPE 30174	Computer Networks and Security	CMPE 30114	4	3	3
CMPE 30184	Microprocessors	CMPE 30094	4	3	3
CMPE 30193	Methods of Research	STAT 20023, CMPE 30184, GEED 10063	3	3	0
CMPE 20103	Technopreneurship		3	3	0
CMPE-E1	CpE Elective 1		3	2	3
GEED 10133	Panitikang Filipino		3	3	0
CMPE 30202	CpE Laws and Professional Practice		2	2	0
		Totals	25	22	9

THIRD YEAR SUMMER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30213	On-the-Job Training 2 (300 hours)		3	1	6
CMPE-E2	CpE Elective 2		3	2	3
		Totals	6	3	9



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FOURTH YEAR FIRST SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30224	Computer Architecture and Organization	CMPE 30184	4	3	3
CMPE 30231	CpE Practice and Design 1	CMPE 30184, CMPE 30193	1	0	3
CMPE 30244	Digital Signal Processing		4	3	3
CMPE-E3	CpE Elective 3		3	2	3
GEED 10093	Ethics		3	3	0
		Totals	15	11	12



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FOURTH YEAR SECOND SEMESTER

Course Code	Course Title	Course Prerequisite/Co-requisite	Course Credit	Number of Hours	
				Lecture	Laboratory
CMPE 30252	CpE Practice and Design 2	CMPE 30231	2	0	6
CMPE 30261	Field Study and Seminars		1	0	3
CMPE 30274	Embedded Systems	CMPE 30184	4	3	3
CMPE 30283	Emerging Technologies in CpE		3	3	0
CMPE-E4	CpE Elective 4		3	2	3
GEED 20093	Reading Visual Arts		3	3	0
		Totals	16	11	15