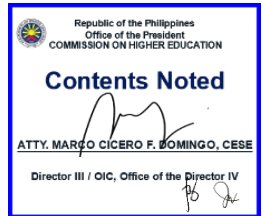




**ENHANCED CURRICULUM**  
**BACHELOR OF SCIENCE IN COMPUTER ENGINEERING**  
(CMO, No. 87, s. 2017, Effective AY 2023-2024)  
**FIRST YEAR**



**First Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
Chem 111 L1	Chemistry for Engineers		3	3	4	
Math Prep 101	Pre-Calculus (Algebra & Trigonometry)		3	0	3	
CpE 111	Computer Engineering as a Discipline		2	0	2	
CpE 112-L1	Programming Logic and Design		0	6	2	
Cal 112	Calculus 1		3	0	3	
Comp. 101	MS Office (MS Word, EXCEL, PPT)		2	3	3	
GE 102	Mathematics for Modern World		3	0	3	
GE 107	Science, Technology and Society		2	0	3	
PATH-FIT 1	Movement Competency Training		2	0	2	
NSTP 1	Civic Work & Training Service/ ROTC/ LTS 1		3	0	3	
	<b>Total Units</b>				<b>28</b>	

**Second Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
Phys 121 L2	Physics for Engineers		2	3	4	Cal 112
Cal 122	Calculus 2		3	0	3	Cal 112
CpE 125-I2	Object Oriented Programming		2	3	3	CpE 112-L1
Math 123	Engineering Data Analysis		3	0	3	Cal 112
CpE 121	Discrete Mathematics		3	0	3	Cal 112
Comp 102	Graphics And Design (Adobe Photoshop, Corel Draw)		2	3	3	Comp. 101
GE 104	Readings in the Philippine History ***		3	0	3	
PATH_FIT 2	Exercised Based Fitness Activities		2	0	2	PATH-FIT 1
NSTP 121	Civic Work & Training Service/ ROTC/LTS II		3	0	3	NSTP 1
	<b>Total Units</b>				<b>27</b>	

**SECOND YEAR**

**First Semester**

COURSE CODE	DESCRIPTIVE TITLE	GRADE S	Lec Hrs	Lab Hrs	UNITS	PRE/CO-REQUISITE
Math 214	Differential Equations		3	0	3	Cal 122
CpE 211	Fundamentals of Electrical Circuits		2	3	3	Phys 121 L2
CpE 212	Engineering Economics		3	0	3	2 <sup>nd</sup> Yr standing
CpE 213	Feedback and Control Systems		3	0	3	2 <sup>nd</sup> Yr standing
CpE-216-L1	Data Structures and Algorithms		1	3	2	CpE 125 L2
GE 100	Purposive Communication		3	0	3	
GE 101	Understanding the Self		3	0	3	
GE 105	The Contemporary World		3	0	3	
Theo 101	Islamic Religion/Other Religion		3	0	3	
PATH-FIT 3	Choice of Dance, Sports, Martial Arts, Group Exercise and Adventure Activities		2	0	2	PATH-FIT 1,2
	<b>Total Units</b>				<b>28</b>	

**Second Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
CAD 221	Computer Aided-Drafting		1	3	2	2 <sup>nd</sup> yr standing
CpE 222	Fundamentals of Electronic Circuits		2	3	3	CpE 211
CpE-224	Numerical Methods		3	0	3	Math 214
CpE-223 L2	Software Design		2	3	3	CpE-216-L1
GE Elect 1	Gender and Society *		3	0	3	
GE 103	Arts Appreciation		3	0	3	
GE 106	Ethics		3	0	3	
GE 108	Life and Works of Rizal		3	0	3	
PATH-FIT 4	Choice of Dance, Sports, Martial Arts, Group Exercise and Adventure Activities		2	0	2	PATH-FIT 1,2,3
Theo 102	Islamic Religion/Other Religion		3	0	3	Theo 101
	<b>Total Units</b>				<b>28</b>	<b>Total Units</b>



**THIRD YEAR**

**First Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
CpE 311	Operating Systems		3	0	3	CpE-216-L1
CpE 312	Data and Digital Communications		3	0	3	CpE 222
CpE 313-L1	Introduction to HDL		2	3	3	CpE 112-L1 and CpE 222
CpE 314	Fundamentals of Mixed Signals and Sensors		3	0	3	CpE 211
CpE 315 L1	Computer Engineering Drafting and Design		1	3	2	CpE 211
CpE 316	Cognate/ Elective Course 1 (System and Network Administration 1)				3	3 <sup>rd</sup> Yr Standing
CpE 317	CpE Laws and Professional Practice		3		3	3 <sup>rd</sup> Yr Standing
CpE 318-L1	Logic Circuits and Design		2	3	3	CpE 222
GE Elect 2	Living in the IT Era		3	0	3	
	<b>Total Units</b>				<b>26</b>	

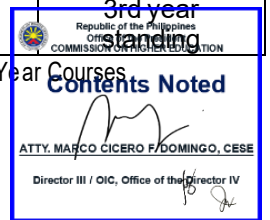
**Second Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
CpE 321	Basic Occupational Health and Safety		3	0	3	3 <sup>rd</sup> Yr Standing
CpE 322	Computer Networks and Security		2	3	3	CpE 312
CpE 323	Microprocessors		2	3	3	CpE 318 L1
CpE 324	Methods of Research		3	0	3	Math 123, CpE 318, GE 100
Tech 325	Technopreneurship		3		3	3 <sup>rd</sup> Yr Standing
CpE 326	Emerging Technologies in CpE		3	0	3	3 <sup>rd</sup> Yr Standing
CpE 327	Cognate/ Elective Course 2 (Software Development 1)				3	Cognate/ Track Course 1
GE Elect 3	Peace Education **		3		3	GE Elect 3
	<b>Total Units</b>				<b>24</b>	

**SUMMER**

Course Code	Descriptive Title	Grades	Lec	Lab	Units	Pre/Co-Requisite
CpE 400	Seminars and fieldtrips		0		2	3 <sup>rd</sup> year standing

Note: No Students shall be allowed to take fourth year Professional Course unless he/she has completed the Basic and Third Year Courses including PE and NSTP Courses



**FOURTH YEAR**

**First Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
CpE 411	Embedded Systems		2	3	3	CpE 323
CpE 412	Computer Architecture and Organization		2	3	3	CpE 323
CpE 413	CpE Practice and Design 1		2	3	3	All Major
CpE 414	Digital Signal Processing		2	3	3	CpE 213
CpE 415	Cognate/ Elective Course 3 (Machine Learning)				3	Cognate/ Track Course 2
	<b>Total Units</b>				<b>15</b>	

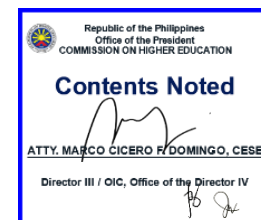
**Second Semester**

Course Code	Descriptive Title	Grades	Lec Hrs	Lab Hrs	Units	Pre/Co-Requisite
CpE 420	CPE Project and Design 2		1	6	3	CpE Practice and Design 1
CpE 421	On Job Training (240 hrs)		3	240	3	4 <sup>th</sup> year Standing
	<b>Total Units</b>				<b>6</b>	



**SCHOOL OF COMPUTER STUDIES & ENGINEERING**  
**SUMMARY OF THE BSCpE CURRICULUM**

Classification/Field/Course	Minimum Credit Units
<b>I. TECHNICAL COURSES</b>	
A. Mathematics	15
B. Natural/Physical Sciences	8
C. Basic Engineering Sciences	8
D. Allied Courses	6
E. Professional Courses	76
F. Cognates/Electives	9
<b>Subtotal</b>	<b>122</b>
<b>II. NON-TECHNICAL COURSES</b>	
A. General Education Courses	24
B. GEC Electives	9
C. Mandated Courses	3
D. PATH-FIT	8
E. NSTP	6
F. Institutional Course:	12
<b>Subtotal</b>	<b>62</b>
<b>GRAND TOTAL (including PE, NSTP and Institutional Courses)</b>	<b>184</b>



**Legend**

- \*GAD (CMO No. 1, s. 2015) is in the G.E Elec 1 (Gender and Society)
- \*\*Peace Studies (CMO No. 1, s. 2019) is in the G.E 103 (Peace Education)
- \*\*\*Indigenous People Studies (CMO No. 2, s. 2019) integrated into G.E 104 (Readings in the Philippine History)

**Suggested Cognates/ Electives**

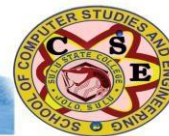
*(The program has an option to include additional cognates/ elective)*

\Embedded Systems	No. of Hours		No. of Hours
	Lab	Lab/Field Drafting	
Embedded Systems 1			3
Embedded Systems 2			3
Embedded Systems 3			3
<b>Microelectronics</b>	<b>Lab</b>	<b>Lab/Field Drafting</b>	
Microelectronics 1			3
Microelectronics 2			3
Microelectronics 3			3
<b>Software Development</b>	<b>Lab</b>	<b>Lab/Field Drafting</b>	
Software Development 1			3
Software Development 2			3
Software Development 3			3
<b>System and Network Administration</b>	<b>Lab</b>	<b>Lab/Field Drafting</b>	
System and Network Administration 1			
System and Network Administration 2			
System and Network Administration 3			
<b>Machine Learning</b>	<b>Lab</b>	<b>Lab/Field Drafting</b>	
Machine Learning 1			3
Machine Learning 2			3
Machine Learning 3			3
<b>Big Data Analytics</b>	<b>Lab</b>	<b>Lab/Field Drafting</b>	
Big Data Analytics 1			3
Big Data Analytics 2			3
Big Data Analytics 3			3
<b>Augmented Reality</b>	<b>Lab</b>	<b>Lab/Field Drafting</b>	
Augmented Reality 1			3
Augmented Reality 2			3
Augmented Reality 3			3



CLASSIFICATION/FIELD/COURSE	MINIMUM NO. OF HOURS/WEEK		MINIMUM CREDITS UNITS
	LECTURE	L/F/D	
<b>I. TECHNICAL COURSES</b>			
<b>A. Mathematics</b>			
Math- Prep	3	0	3
Calculus 1	3	0	3
Calculus 2	3	0	3
Engineering Data Analysis	3	0	3
Differential Equations	3	0	3
<b>Subtotal</b>	<b>12</b>	<b>0</b>	<b>15</b>
<b>B. Natural/Physical Sciences</b>			
Chemistry for Engineers	3	3	4
Physics for Engineers	3	3	4
<b>Subtotal</b>	<b>6</b>	<b>3</b>	<b>8</b>
<b>C. Basic Engineering Sciences</b>			
Computer-Aided Drafting	0	3	2
Engineering Economics	3	0	3
Technopreneurship	3	0	3
<b>Subtotal</b>	<b>6</b>	<b>3</b>	<b>8</b>
<b>D. Allied Courses</b>			
Fundamentals of Electrical Circuits	3	3	3
Fundamentals of Electronic Circuits	3	3	3
<b>Subtotal</b>	<b>6</b>	<b>6</b>	<b>6</b>
<b>E. Professional Courses</b>			
Discrete Mathematics	3	0	3
Numerical Methods	3	0	3
Computer Engineering as A Discipline	1	0	2
Fundamentals of Mixed Signals and Sensors	3	0	3
Computer Engineering Drafting and Design	0	3	2
Programming Logic and Design	0	6	2
Data Structures and Algorithms	0	6	2
Object Oriented Programming	0	6	3
Software Design	3	3	3
Microprocessors	3	3	3
Logic Circuits and Design	3	3	3
Methods of Research	2	0	3
Operating Systems	3	0	3
Computer Architecture and Organization	3	3	3
Data and Digital Communications	3	0	3
Computer Networks and Security	3	3	3
Embedded Systems	3	3	3
Digital Signal Processing	3	3	3
Feedback and Control Systems	3	0	3
Introduction to HDL	0	3	3
Seminars and Fieldtrips	0	3	2
Basic Occupational Health and Safety	3	0	3
CpE Laws and Professional Practice	2	0	3
Emerging Technologies in CpE	3	0	3
CpE Practice and Design 1	0	3	3
CpE Practice and Design 2	0	6	3
On the Job Training	3	240	3
<b>Subtotal</b>	<b>53</b>	<b>297</b>	<b>77</b>
<b>F. Cognates/Electives (Please refer to suggested Electives)</b>			
Cognate/Track Course 1	-	-	3
Cognate/ Track Course 2	-	-	3
Cognate/Track Course 3	-	-	3
<b>Subtotal</b>			<b>9</b>

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<b>II. NON TECHNICAL COURSES</b>			
<b>A. General Education Courses</b>			
Science, Technology and Society	3	0	3
The Contemporary World	3	0	3
Readings in Philippine History	3	0	3
Understanding the Self	3	0	3
Art Appreciation	3	0	3
Purposive Communication	3	0	3
Mathematics in the Modern World	3	0	3
Ethics	3	0	3
<b>Subtotal</b>	<b>24</b>	<b>0</b>	<b>24</b>
<b>B. GEC Electives/ Mandated Courses</b>			
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
<b>Subtotal</b>	<b>12</b>	<b>0</b>	<b>12</b>
<b>C. Physical Activities Toward Health &amp; Fitness</b>			
PATH- FIT 1	2	0	2
PATH- FIT 2	2	0	2
PATH- FIT 3	2	0	2
PATH- FIT 4	2	0	2
<b>Subtotal</b>	<b>8</b>	<b>0</b>	<b>8</b>
<b>D. National Service Training Program</b>			
NSTP 1	3	0	3
NSTP 2	3	0	3
<b>Subtotal</b>	<b>6</b>	<b>0</b>	<b>6</b>
<b>E. Institutional Course</b>			
Theology 1- Islamic religion/ other religion	3	0	3
Theology 2 - Islamic religion/ other religion	3	0	3
Com. 101 - MS Office	3	0	3
Com. 102- Graphics and Design	3	0	3
<b>Subtotal</b>	<b>12</b>	<b>0</b>	<b>12</b>
<b>GRAND TOTAL</b>	<b>139</b>	<b>312</b>	<b>184</b>

Republic of the Philippines  
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*(Signature)*  
**ATTY. MARCO CICERO R. DOMINGO, CESE**

Director III / OIC, Office of the Director IV



SCHOOL OF COMPUTER STUDIES & ENGINEERING

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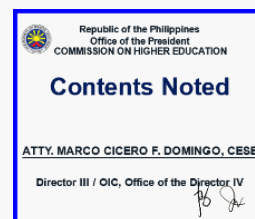
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