



**San Beda College Alabang**  
School of Engineering and Technology  
**BACHELOR OF SCIENCE IN COMPUTER ENGINEERING**  
**CURRICULUM**  
Program Study, Effective A.Y. 2023-2024



**FIRST YEAR**

1st Year - 1st Semester (Term 1)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
MATH101	Calculus 1: Differential Calculus	3	
CHEM101R	Chemistry for Engineers Lec	3	
CHEM101L	Chemistry for Engineers Lab	1	
CPE101	Fundamentals of Computer Programming	2	
CPE102	Computer Engineering as a Discipline	1	
GEN-SS	Science, Technology and Society	3	
GENE-RES	GEC Elective 1 (Religious Experience and Benedictine Spirituality)	3	
MATH100	Mathematics for Engineers	3	
PE1	Physical Activities toward Health and Fitness 1	2	
NSTP1	National Service Training Program 1	3	
PEP1	Personality Development	1	
<b>TOTAL</b>		<b>25</b>	

1st Year - 2nd Semester (Term 2)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
MATH102	Calculus 2: Integral Calculus	3	Math101 Calculus 1
MATH103	Engineering Data Analysis	3	Math101
PHYS101R	Physics for Engineers Lec	3	Math101
PHYS101L	Physics for Engineers Lab	1	Math101
CPE103	Computer Programming Logic and Design	2	CPE101
CPE104	Discrete Mathematics	3	Math101
PEP2	Human Relations Development	1	PEP1
PE2	Physical Activities toward Health and Fitness 2	2	PE1
THEO1-NTC	Jesus in the New Testament and Contemporary Times	3	GENE-RES
NSTP2	National Service Training Program 2	3	NSTP1
<b>TOTAL</b>		<b>24</b>	

**SECOND YEAR**

2nd Year - 1st Semester (Term 3)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
MATH104	Differential Equations	3	Math102
EE101R	Fundamentals of Electrical Circuits Lec	3	PHYS101R
EE101L	Fundamentals of Electrical Circuits Lab	1	PHYS101L
CPE201	Object Oriented Programming	2	CPE103
ENG101	Computer-Aided Drafting	1	CPE101
GEN-AA	Art Appreciation	3	
GEN-MM	Mathematics in the Modern World	3	
ECO101	Engineering Economics	3	
THEO2-CSM	The Church, Sacraments and its Mission	3	THEO1-NTC
PE3	Physical Activities toward Health and Fitness 3	2	PE2
<b>TOTAL</b>		<b>24</b>	

2nd Year - 2nd Semester (Term 4)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE202	Numerical Methods	3	Math104
CPE203	Data Structures and Algorithms	2	CPE201
GENE-ICC	GEC Elective 2 (Indigenous Creative Crafts)	3	
GEN-US	Understanding the self	3	
ECE101R	Fundamentals of Electronic Circuits Lec	3	EE101R
ECE101L	Fundamentals of Electronic Circuits Lab	1	EE101L
GEN-JR	Life and Works of Rizal	3	
GEN-PC	Purposive Communications	3	
PE4	Physical Activities towards Health and Fitness 4	2	PE 3
GENE-IT	GEC Elective 3 (Living in the IT Era)	3	
<b>TOTAL</b>		<b>26</b>	

**THIRD YEAR**

3rd Year - 1st Semester (Term 5)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE301R	Software Design Lec	3	CPE203
CPE301L	Software Design Lab	1	CPE203
CPE302	Introduction to HDL	1	CPE103
CPE303R	Logic Circuits and Design Lec	3	ECE101R
CPE303L	Logic Circuits and Design Lab	1	ECE101L
CPE304	Computer Engineering Drafting and Design	1	ECE101R/L
CPE305	Feedback and Control Systems	3	CPE202 EE101R/L
CPE306	Data and Digital Communications	3	ECE101R/L
CPE307	Fundamentals of Mixed Signals and Sensors	3	ECE101R/L
CPE308	Operating Systems	3	CPE203
CPE501R	CPE Elective 1 Lec	3	3rd Year Standing
CPE501L	CPE Elective 1 Lab	1	3rd Year Standing
<b>TOTAL</b>		<b>26</b>	

3rd Year - 2nd Semester (Term 6)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE309	Occupational Health and Safety Engineering	3	3rd Year Standing
CPE310R	Microprocessors and Microcontroller Systems Lec	3	CPE303R/L
CPE310L	Microprocessors and Microcontroller Systems Lab	1	CPE303R/L
CPE311R	Computer Networks and Security Lec	3	CPE306
CPE311L	Computer Networks and Security Lab	1	CPE306
CPE312	Methods of Research	3	Math103 CPE303
CPE313	CpE Laws and Professional Practice	3	3rd Year Standing
GEN-ET	Ethics (Being and Society)	3	
CPE502R	CPE Elective 2 Lec	3	CPE501R
CPE502L	CPE Elective 2 Lab	1	CPE501L
THEO3-FAM	Marriage and Family Life	3	THEO2-CSM
<b>TOTAL</b>		<b>27</b>	

3rd Year Summer Semester (Term 7)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE401	On the Job Training (240 hours)	3	4th Year Standing
<b>TOTAL</b>		<b>3</b>	

**FOURTH YEAR**

4th Year - 1st Semester (Term 8)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE402	CpE Design Project 1 / Capstone Project 1	1	CPE312 CPE310R/L
CPE403R	Computer Architecture and Organization Lec	3	CPE310R
CPE403L	Computer Architecture and Organization Lab	1	CPE310L
CPE404R	Embedded Systems Lec	3	CPE310R
CPE404L	Embedded Systems Lab	1	CPE310L
CPE405	Emerging Technologies in CpE	3	4th Year Standing
CPE406R	Digital Signal Processing Lec	3	CPE305
CPE406L	Digital Signal Processing Lab	1	CPE305
CPE503R	CPE Elective 3 Lec	3	CPE502R
CPE503L	CPE Elective 3 Lab	1	CPE502L
THEO4-CST	Benedictine and Lay Apostolate	3	THEO3-FAM
<b>TOTAL</b>		<b>23</b>	

4th Year - 2nd Semester (Term 9)			
COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE407	Seminars / Colloquia / Field Trips	1	4th Year Standing
CPE408	CpE Design Project 2 / Capstone Project 2	2	CPE402
ENG103	Technopreneurship 101	3	
GEN-CW	The Contemporary World	3	
GEN-RP	Readings in Philippine History	3	
<b>TOTAL</b>		<b>12</b>	

**GRAND TOTAL: 190**

**CPE ELECTIVES: 12 UNITS**

COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE501R	Software Development 1 (Desktop Application)	3	
CPE501L	Software Development 1 (Desktop Application)	1	
CPE502R	Software Development 2 (Web Application with IoT)	3	

COURSE CODE	COURSE TITLE	UNITS	PRE-REQ
CPE502L	Software Development 2 (Web Application with IoT)	1	
CPE503R	Software Development 3 (Mobile Application with IoT)	3	
CPE503L	Software Development 3 (Mobile Application with IoT)	1	