



Republic of the Philippines
BATANGAS STATE UNIVERSITY
The National Engineering University
Alangilan Campus

Golden Country Homes, Alangilan, Batangas City, Philippines 4200

Tel Nos.: (0 43) 425-0139; 425-0143 local 2223

E-mail Address: cics.alangilan@g.batstate-u.edu.ph | Website Address: <http://www.batstate-u.edu.ph>

College of Informatics and Computing Sciences

CURRICULUM
Bachelor of Science in Computer Science (BSCS)

PROGRAM OF STUDY

FIRST YEAR					
FIRST SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
IT 111	Introduction to Computing	3	2	3	-
CS 111	Computer Programming	3	2	3	-
Fili 101	Kontekstwalisadong Komunikasyon sa Filipino	3	3	-	-
GEd 101	Understanding the Self	3	3	-	-
GEd 102	Mathematics in the Modern World	3	3	-	-
Math 111	Linear Algebra	3	3	-	-
PATHFit 1	Movement Competency Training	2	2	-	-
NSTP 111	National Service Training Program 1	3	3	-	-
TOTAL		23	21	6	

FIRST YEAR					
SECOND SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 121	Advanced Computer Programming	3	2	3	CS 111
Fili 102	Filipino sa Iba't Ibang Disiplina	3	3	-	-
GEd 105	Readings in Philippine History	3	3	-	-
GEd 108	Art Appreciation	3	3	-	-
Math 401	Differential Calculus	3	3	-	Math 111
Math 407	Number Theory	3	3	-	GEd 102
PATHFit 2	Exercise-Based Fitness Activities	2	2	-	PATHFit 1
NSTP 121	National Service Training Program 2	3	3	-	NSTP 111
TOTAL		23	22	3	

FIRST YEAR					
MIDTERM					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 131	Data Structures and Algorithms	3	2	3	CS 121
Math 402	Integral Calculus	3	3	-	Math 401
Litr 102	ASEAN Literature	3	3	-	-
TOTAL		9	8	3	

SECOND YEAR					
FIRST SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 211	Object-Oriented Programming	3	2	3	CS 131
CS 212	Computer Organization w/ Assembly Language	3	2	3	IT 111, CS 111
IT 211	Database Management Systems	3	2	3	IT 111
IT 212	Computer Networking 1	3	2	3	IT 111
Phy 101	Calculus-Based Physics	3	2	3	Math 402
CpE 405	Discrete Mathematics	3	3	-	Math 401
GEd 109	Science, Technology and Society	3	3	-	-
PATHFit 3	Traditional and Recreational Games	2	2	-	PATHFit 1 and 2
TOTAL		23	18	15	



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SECOND YEAR					
SECOND SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 221	Design and Analysis of Algorithms	3	2	3	CS 131
CS 222	Advanced Object-Oriented Programming	3	2	3	CS 211
IT 221	Information Management	3	2	3	IT 111
GEd 106	Purposive Communication	3	3	-	-
GEd 107	Ethics	3	3	-	-
ES 101	Environmental Sciences	3	2	3	Phy 101
ENGG 414	Numerical Methods	3	3	-	Math 402
PATHFit 4	Team Sports (Basketball and Volleyball)	2	2	-	PATHFit 1 and 2
TOTAL		23	19	12	

THIRD YEAR					
FIRST SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 311	Automata Theory and Formal Languages	3	3	-	CS 221
CS 312	Mobile Computing	3	2	3	CS 211
IT 321	Human Computer Interaction	3	3	-	CS 222
IT 314	Web Systems and Technologies	3	2	3	CS 211
IT 331	Application Development and Emerging Technologies	3	2	3	IT 221
Math 408	Data Analysis	3	3	-	Math 401
GEd 104	The Contemporary World	3	3	-	-
TOTAL		21	18	9	

THIRD YEAR					
SECOND SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 321	Programming Languages	3	3	-	CS 311
CS 322	Software Engineering	3	2	3	IT 321
CS 323	Computer Architecture	3	3	-	CS 212
CS 324	Modeling and Simulation	3	2	3	CS 221, Math 408
	CS Professional Elective 1	3	2	3	
Math 409	Symbolic Logic	3	3	-	Math 407
GEd 103	Life and Works of Rizal	3	3	-	
TOTAL		21	18	9	

THIRD YEAR					
MIDTERM					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 331	CS Internship	3	-	162	Regular 3 rd Year
TOTAL		3	-	162	

FOURTH YEAR					
FIRST SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 411	CS Thesis 1	3	3	-	Regular 4 th Year
CS 412	Fundamentals of Data Science	3	2	3	CS 324
CS 413	Advanced Software Engineering	3	2	3	CS 322
CS 414	Artificial Intelligence	3	2	3	CS 324
CS 415	Principles of Operating Systems	3	3	-	CS 323
	CS Professional Elective 2	3	2	3	
TOTAL		18	14	12	



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FOURTH YEAR					
SECOND SEMESTER					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 421	CS Thesis 2	3	3	-	CS 411
CS 422	Machine Learning	3	2	3	CS 414
CS 423	Social Issues and Professional Practice	3	3	-	IT 111
IT 323	Information Assurance and Security	3	2	3	IT 212
ENGG 405	Technopreneurship	3	3	-	CS 411
	CS Professional Elective 3	3	2	3	
TOTAL		18	15	9	

A student must take 9 units of any offered CS Professional Electives listed below.					
Code	Course Title	Units	Lec	Lab	Prerequisite
CS 325	Computational Science	3	2	3	IT 331
CS 326	Graphics and Visual Computing	3	2	3	IT 322
CS 424	Parallel and Distributed Computing	3	2	3	CS 415
CS 425	Systems Fundamentals	3	2	3	CS 322
IT 223	Computer Networking 2	3	2	3	IT 212
NTT 401	Computer Networking 3	3	2	3	NT 01
NTT 402	Internet-of-Things (IoT)	3	2	3	NT 01
NTT 404	Cloud Computing	3	2	3	NT 02
NTT 405	Cybersecurity	3	2	3	NT 01
IT 414	Software Quality Assurance	3	2	3	CS 413