

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 Information Technology (BSIT)

PROGRAM OF STUDY (Network Technology Track)

	FIRST YEAR							
FIRST SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite			
IT 111	Introduction to Computing	3	2	3	-			
GEd 102	Mathematics in the Modern World	3	3	-	-			
GEd 108	Art Appreciation	3	3	-	-			
FILI 101	Kontekstwalisadong Komunikasyon sa Filipino	3	3	-	-			
PATHFit 1	Movement Competency Training	2	2	-	-			
NSTP 111	National Service Training Program 1	3	3	-	-			
GEd 103	The Life and Works of Rizal	3	3	-	-			
GEd 104	The Contemporary World	3	3	-	-			
	TOTAL	23	22	3				

	FIRST YEAR								
	SECOND SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite				
CS 111	Computer Programming	3	2	3	IT 111				
CS 131	Data Structures and Algorithms	3	2	3	IT 111				
MATH 111	Linear Algebra	3	3	-	GEd 102				
FILI 102	Filipino sa Iba't Ibang Disiplina	3	3	-	-				
GEd 105	Readings in Philippine History	3	3	-	-				
GEd 109	Science, Technology and Society	3	3	-	-				
PATHFit 2	Exercise-Based Fitness Activities	2	2	-	PATHFit 1				
NSTP 121	National Service Training Program 2	3	3	-	NSTP 111				
	TOTAL	23	21	6					

	SECOND YEAR								
	FIRST SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite				
CS 121	Advanced Computer Programming	3	2	3	CS 111				
IT 211	Database Management System	3	2	3	CS 111				
CS 211	Object-Oriented Programming	3	2	3	CS 111, CS 131				
LITR 102	ASEAN Literature	3	3	-	-				
CpE 405	Discrete Mathematics	3	3	-	MATH 111				
PHY 101	Calculus Based Physics	3	2	3	MATH 111				
IT 212	Computer Networking 1	3	2	3	IT 111				
PATHFit 3	Traditional and Recreational Games	2	2	-	PATHFit 1 and 2				
	TOTAL	23	18	15					

	SECOND YEAR								
	SECOND SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 221	Information Management	3	2	3	IT 111				
IT 223	Computer Networking 2	3	2	3	IT 212				
IT 222	Advanced Database Management System	3	2	3	IT 211				
MATH 408	Data Analysis	3	3	-	MATH 111				
ES 101	Environmental Sciences	3	2	3	PHY 101				
GEd 106	Purposive Communication	3	3	-	-				
GEd 101	Understanding the Self	3	3	-	-				
PATHFit 4	Team Sports (Basketball and Volleyball)	2	2	-	PATHFit 1 and 2				
	TOTAL	23	19	12					



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	THIRD YEAR								
	FIRST SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 311	Systems Administration and Maintenance	3	2	3	IT 221,IT 222				
IT 312	System Integration and Architecture	3	2	3	CS 131				
NTT 401	Computer Networking 3	3	2	3	IT 223				
NTT 402	Internet of Things (IoT)	3	2	3	IT 223				
IT 313	System Analysis and Design	3	2	3	IT 222				
IT 314	Web Systems and Technologies	3	2	3	CS 211				
GEd 107	Ethics	3	3	-	-				
	TOTAL	21	15	18					

	THIRD YEAR								
	SECOND SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 321	Human-computer interaction	3	3	-	IT 314				
NTT 403	Computer Networking 4	3	2	3	NTT 401				
NTT 404	Cloud Computing	3	2	3	NTT 402				
IT 322	Advanced System Integration and Architecture	3	2	3	IT 312				
IT 323	Information Assurance and Security	3	2	3	IT 223				
IT 324	Capstone Project 1	3	3	-	3 rd Year Standing				
IT 325	IT Project Management	3	3	-	IT 313				
	TOTAL	21	17	12					

	THIRD YEAR						
	MIDTERM						
Code	Course Title	Units	Lec	Lab	Prerequisite		
IT 331	Application Development and Emerging Technologies	3	2	3	IT 321		
IT 332	Integrative Programming and Technologies	3	2	3	IT 314		
	TOTAL	6	4	6			

	FOURTH YEAR								
FIRST SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
CS 423	Social Issues and Professional Practice	3	3	-	-				
IT 411	Capstone Project 2	3	3	-	IT 324				
NTT 405	Cybersecurity	3	2	3	NTT 403				
ENGG 405	Technopreneurship	3	3	-	-				
IT 413	Advanced Information Assurance and Security	3	2	3	IT 323				
IT 414	System Quality Assurance	3	2	3	IT 325				
IT 412	Platform Technologies	3	3	-	IT 332				
	TOTAL	21	18	9					

	FOURTH YEAR				
	SECOND SEMESTER				
Code	Course Title	Units	Lec	Lab	Prerequisite
IT 421	Internship Training	6	-	500	4 th Year Standing
	TOTAL	6	-	500	



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PROGRAM OF STUDY (Business Analytics Track)

	FIRST YEAR								
FIRST SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 111	Introduction to Computing	3	2	3	-				
GEd 102	Mathematics in the Modern World	3	3	-	-				
GEd 108	Art Appreciation	3	3	-	-				
FILI 101	Kontekstwalisadong Komunikasyon sa Filipino	3	3	-	-				
PATHFit 1	Movement Competency Training	2	2	-	-				
NSTP 111	National Service Training Program 1	3	3	-	-				
GEd 103	The Life and Works of Rizal	3	3	-	-				
GEd 104	The Contemporary World	3	3	-	-				
	TOTAL	23	22	3					

	FIRST YEAR SECOND SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite				
CS 111	Computer Programming	3	2	3	IT 111				
CS 131	Data Structures and Algorithms	3	2	3	IT 111				
MATH 111	Linear Algebra	3	3	-	GEd 102				
FILI 102	Filipino sa Iba't Ibang Disiplina	3	3	-	-				
GEd 105	Readings in Philippine History	3	3	-	-				
GEd 109	Science, Technology and Society	3	3	-	-				
PATHFit 2	Exercise-Based Fitness Activities	2	2	-	PATHFit 1				
NSTP 121	National Service Training Program 2	3	3	-	NSTP 111				
	TOTAL	23	21	6					

	SECOND YEAR								
FIRST SEMESTER									
Code	Course Title		Units	Lec	Lab	Prerequisite			
CS 121	Advanced Computer Programming		3	2	3	CS 111			
IT 211	Database Management System		3	2	3	CS 111			
CS 211	Object-Oriented Programming		3	2	3	CS 111, CS 131			
LITR 102	ASEAN Literature		3	3	-	-			
CpE 405	Discrete Mathematics		3	3	-	MATH 111			
PHY 101	Calculus Based Physics		3	2	3	MATH 111			
IT 212	Computer Networking 1		3	2	3	IT 111			
PATHFit 3	Traditional and Recreational Games		2	2	-	PATHFit 1 and 2			
		TOTAL	23	18	15				

	SECOND YEAR								
SECOND SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 221	Information Management	3	2	3	IT 111				
IT 223	Computer Networking 2	3	2	3	IT 212				
IT 222	Advanced Database Management System	3	2	3	IT 211				
MATH 408	Data Analysis	3	3	-	MATH 111				
ES 101	Environmental Sciences	3	2	3	PHY 101				
GEd 106	Purposive Communication	3	3	-	-				
GEd 101	Understanding the Self	3	3	-	-				
PATHFit 4	Team Sports (Basketball and Volleyball)	2	2	-	PATHFit 1 and 2				
	TOTAL	23	19	12					



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	THIRD YEAR								
FIRST SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 311	Systems Administration and Maintenance	3	2	3	IT 221,IT 222				
IT 312	System Integration and Architecture	3	2	3	CS 131				
BAT 401	Fundamentals of Business Analytics	3	2	3	IT 221,IT 222				
BAT 402	Fundamentals of Analytics Modeling	3	2	3	IT 221,IT 222				
IT 313	System Analysis and Design	3	2	3	IT 222				
IT 314	Web Systems and Technologies	3	2	3	CS 211				
GEd 107	Ethics	3	3	-	-				
	TOTAL	. 21	15	18					

	THIRD YEAR								
SECOND SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 321	Human-computer interaction	3	3	-	IT 314				
BAT 403	Fundamentals of Enterprise Data Management	3	2	3	BAT 401				
BAT 404	Analytics Techniques & Tools	3	2	3	BAT 402				
IT 322	Advanced System Integration and Architecture	3	2	3	IT 312				
IT 323	Information Assurance and Security	3	2	3	IT 223				
IT 324	Capstone Project 1	3	3	-	3 rd Year Standing				
IT 325	IT Project Management	3	3	-	IT 313				
	TOTAL	21	17	12					

	THIRD YEAR							
	MIDTERM							
Code	Course Title	Units	Lec	Lab	Prerequisite			
IT 331	Application Development and Emerging Technologies	3	2	3	IT 321			
IT 332	Integrative Programming and Technologies	3	2	3	IT 314			
	TOTAL	6	4	6				

	FOURTH YEAR								
FIRST SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
CS 423	Social Issues and Professional Practice	3	3	-	-				
IT 411	Capstone Project 2	3	3	-	IT 324				
BAT 405	Analytics Application	3	2	3	BAT 404				
ENGG 405	Technopreneurship	3	3	-	-				
IT 413	Advanced Information Assurance and Security	3	2	3	IT 323				
IT 414	System Quality Assurance	3	2	3	IT 325				
IT 412	Platform Technologies	3	3	-	IT 332				
	TOTAL	21	18	9					

	FOURTH YEAR							
SECOND SEN	MESTER							
Code	Course Title	Units	Lec	Lab	Prerequisite			
IT 421	Internship Training	6	-	500	4 th Year Standing			
	TOTAL	6	-	500				



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PROGRAM OF STUDY (Service Management Track)

	FIRST YEAR							
FIRST SEMESTER								
Code	Course Title	Units	Lec	Lab	Prerequisite			
IT 111	Introduction to Computing	3	2	3	-			
GEd 102	Mathematics in the Modern World	3	3	-	-			
GEd 108	Art Appreciation	3	3	-	-			
FILI 101	Kontekstwalisadong Komunikasyon sa Filipino	3	3	-	-			
PATHFit 1	Movement Competency Training	2	2	-	-			
NSTP 111	National Service Training Program 1	3	3	-	-			
GEd 103	The Life and Works of Rizal	3	3	-	-			
GEd 104	The Contemporary World	3	3	-	-			
	TOTAL	23	22	3				

	FIRST YEAR									
SECOND SEMESTER										
Code	Course Title	Units	Lec	Lab	Prerequisite					
CS 111	Computer Programming	3	2	3	IT 111					
CS 131	Data Structures and Algorithms	3	2	3	IT 111					
MATH 111	Linear Algebra	3	3	-	GEd 102					
FILI 102	Filipino sa Iba't Ibang Disiplina	3	3	-	-					
GEd 105	Readings in Philippine History	3	3	-	-					
GEd 109	Science, Technology and Society	3	3	-	-					
PATHFit 2	Exercise-Based Fitness Activities	2	2	-	PATHFit 1					
NSTP 112	National Service Training Program 2	3	3	-	NSTP 111					
	TOTA	L 23	21	6						

	SECOND YEAR								
FIRST SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
CS 121	Advanced Computer Programming	3	2	3	CS 111				
IT 211	Database Management System	3	2	3	CS 111				
CS 211	Object-Oriented Programming	3	2	3	CS 111, CS 131				
LITR 102	ASEAN Literature	3	3	-	-				
CpE 405	Discrete Mathematics	3	3	-	MATH 111				
PHY 101	Calculus Based Physics	3	2	3	MATH 111				
IT 212	Computer Networking 1	3	2	3	IT 111				
PATHFit 3	Traditional and Recreational Games	2	2	-	PATHFit 1 and 2				
	TOTAL	23	18	15					

	SECOND YEAR								
SECOND SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 221	Information Management	3	2	3	IT 111				
IT 223	Computer Networking 2	3	2	3	IT 212				
IT 222	Advanced Database Management System	3	2	3	IT 211				
MATH 408	Data Analysis	3	3	-	MATH 111				
ES 101	Environmental Sciences	3	2	3	PHY 101				
GEd 106	Purposive Communication	3	3	-	-				
GEd 101	Understanding the Self	3	3	-	-				
PATHFit 4	Team Sports (Basketball and Volleyball)	2	2	-	PATHFit 1 and 2				
	TOTAL	23	19	12					



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	THIRD YEAR								
FIRST SEMESTER									
Code	Course Title	Units	Lec	Lab	Prerequisite				
IT 311	Systems Administration and Maintenance	3	2	3	IT 221,IT 222				
IT 312	System Integration and Architecture	3	2	3	CS 131				
SMT 401	Fundamentals of Business Process Outsourcing 101	3	2	3	IT 221				
SMT 402	Business Communication	3	2	3	IT 221				
IT 313	System Analysis and Design	3	2	3	IT 222				
IT 314	Web Systems and Technologies	3	2	3	CS 211				
GEd 107	Ethics	3	3	-	-				
	TOTAL	21	15	18					

	THIRD YEAR							
	SECOND SEMESTER							
Code	Course Title	Units	Lec	Lab	Prerequisite			
IT 321	Human-computer interaction	3	3	-	IT 314			
SMT 403	Fundamentals of Business Process Outsourcing 102	3	2	3	SMT 401			
SMT 404	Service Culture	3	2	3	SMT 401			
IT 322	Advanced System Integration and Architecture	3	2	3	IT 312			
IT 323	Information Assurance and Security	3	2	3	IT 223			
IT 324	Capstone Project 1	3	3	-	3 rd Year Standing			
IT 325	IT Project Management	3	3	-	IT 313			
	TO'	TAL 21	17	12				

THIRD YEAR MIDTERM						
IT 331	Application Development and Emerging Technologies	3	2	3	IT 321	
IT 332	Integrative Programming and Technologies	3	2	3	IT 314	
	TOTAL	6	4	6		

	FOURTH YEAR						
FIRST SEMESTER							
Code	Course Title	Units	Lec	Lab	Prerequisite		
CS 423	Social Issues and Professional Practice	3	3	-	-		
IT 411	Capstone Project 2	3	3	-	IT 324		
SMT 405	Principles of System Thinking	3	2	3	SMT 403		
ENGG 405	Technopreneurship	3	3	-	-		
IT 413	Advanced Information Assurance and Security	3	2	3	IT 323		
IT 414	System Quality Assurance	3	2	3	IT 325		
IT 412	Platform Technologies	3	3	-	IT 332		
	TOTAL	21	18	9			

FOURTH YEAR							
SECOND SEMESTER							
Code	Course Title	Units	Lec	Lab	Prerequisite		
IT 421	Internship Training	6	-	500	4 th Year Standing		
	TOTAL	6	-	500			