

# Colegio de San Juan de Letran Calamba

Bo. Bucal, City of Calamba, Laguna

## BACHELOR OF SCIENCE IN COMPUTER SCIENCE Specializing in Data Science Curriculum Year 2023-2024

Course Code	Course Title	Lec	Lab		Total	PRE-REQUISITES/ CO-REQUISITES
		Units/Hrs	Units	Hrs		
<b>FIRST YEAR, First Semester</b>						
COMP301L-23	Introduction to Computing Lab		1	3	1	co-req COMP302-23
COMP302-23	Introduction to Computing	2			2	co-req COMP301L-23
COMP311L	Computer Programming I Lab		1	3	1	co-req COMP312
COMP312	Computer Programming I	2			2	co-req COMP311L
CSIT323A-23	Introduction to Discrete Structures	3			3	co-req MATH293
CSIT331L	Intro to Human Computer Interaction Lab		1	3	1	co-req CSIT332
CSIT332	Intro to Human Computer Interaction	2			2	co-req CSIT331L
GEC003	Understanding the Self	3			3	
GEC033	Mathematics in the Modern World	3			3	
LQEC23-013	Letran Quality Enhancement Course I (Letran Calamba Identity and 21st Century Learning Skills)	3			3	
MATH293	Probability and Statistics	3			3	co-req CSIT323A-23, GEC033
	<b>Total</b>	<b>21</b>	<b>3</b>	<b>9</b>	<b>24</b>	
<b>FIRST YEAR, Second Semester</b>						
COMP041L	Data Structures and Algorithms Lab		1	3	1	co-req COMP042
COMP042	Data Structures and Algorithms	2			2	co-req COMP041L
COMP331L	Computer Programming II Lab		1	3	1	COMP312, COMP311L, co-req COMP332
COMP332	Computer Programming II	2			2	COMP312, COMP311L co-req COMP331L
CS323B-23	Advance Discrete Structures	3			3	CSIT323A-23
CSDS031L	Data Analysis and Visualization Lab		1	3	1	COMP302-23, COMP301L-23, co-req CSDS032
CSDS032	Data Analysis and Visualization	2			2	COMP302-23, COMP301L-23, co-req CSDS031L
GEC053	Art Appreciation	3			3	
GEC063	Purposive Communication	3			3	
NSTP1-18	National Service Training Program 1	3			3	
PATHFIT1002	Movement Competency Training	2			2	
RELED053	The Catholic Christian Faith	3			3	
	<b>Total</b>	<b>23</b>	<b>3</b>	<b>9</b>	<b>26</b>	
<b>SECOND YEAR, First Semester</b>						
COMP111L	Information Management Lab		1	3	1	COMP312, COMP311L, co-req COMP112
COMP112	Information Management	2			2	COMP312, COMP311L, co-req COMP111L
CSDS003	Matrix Algebra	3			3	MATH293, CS323B-23
CSDS283	Artificial Intelligence	3			3	COMP042, COMP041L
CSIT153-23	Computer Algorithms and Complexity	3			3	COMP042, COMP041L
CSIT361L	Object-Oriented Programming Lab		1	3	1	COMP332, COMP331L, co-req CSIT362
CSIT362	Object-Oriented Programming	2			2	COMP332, COMP331L, co-req CSIT361L
CSIT391L-23	Programming Languages Lab (Python Programming)		1	3	1	CSDS032, CSDS031L, co-req CSIT392
CSIT392	Programming Languages	2			2	CSDS032, CSDS031L, co-req CSIT391L-23
NSTP2-18	National Service Training Program 2	3			3	NSTP1-18
PATHFIT2022	Exercise Based Fitness Activities	2			2	PATHFIT1002
RELED063	Contemporary Issues in Christian Marriage	3			3	RELED053
	<b>Total</b>	<b>23</b>	<b>3</b>	<b>9</b>	<b>26</b>	
<b>SECOND YEAR, Second Semester</b>						
CSDS041L	Advanced Python Programming Lab		1	3	1	CSIT392, CSIT391L-23, Co-req CSDS042
CSDS042	Advanced Python Programming	2			2	CSIT392, CSIT391L-23, Co-req CSDS041L
CSDS051L	Introduction to Machine Learning Lab		1	3	1	CSIT153-23, CSDS283, co-req CSDS052
CSDS052	Introduction to Machine Learning	2			2	CSIT153-23, CSDS283, co-req CSDS051L
CSElec-1	CS Elective 1	3			3	CSIT153-23
CSIT141A-L-23	Software Engineering I Lab (Mobile Programming I Lab)		1	3	1	COMP112, COMP111L, co req CSIT142A
CSIT142A	Software Engineering I	2			2	COMP112, COMP111L, co req CSIT141A-L-23
CSIT163-23	Computer Architecture and Organization	3			3	CSIT153-23, co-req CSIT252-23, CSIT251L-23
CSIT251L-23	Fundamentals of Networking Lab		1	3	1	co-req CSIT252-23, CSIT163-23
CSIT252-23	Fundamentals of Networking	2			2	co-req CSIT251L-23, CSIT163-23
GECELEC1	Living in the IT Era	3			3	
PATHFIT3032	Individual/Dual Sports	2			2	PATHFIT1002, PATHFIT2022
RELED083	Christian Ethics	3			3	RELED053
	<b>Total</b>	<b>22</b>	<b>4</b>	<b>12</b>	<b>26</b>	

Course Code	Course Title	Lec	Lab		Total	PRE-REQUISITES/ CO-REQUISITES
		Units/Hrs	Units	Hrs		
<b>THIRD YEAR, First Semester</b>						
COMP461L	Applications Development & Emerging Technologies Lab		1	3	1	CSIT142A, CSIT141A-L-23, co req COMP462
COMP462	Applications Development & Emerging Technologies	2			2	CSIT142A, CSIT141A-L-23, co req COMP461L
CSDS013	Calculus	3			3	CSDS003
CSDS061L	Advance Machine Learning Lab		1	3	1	CSDS052, CSDS051L, co-req CSDS062
CSDS062	Advance Machine Learning	2			2	CSDS052, CSDS051L, co-req CSDS061L
CSDS071AL	Data Science I Lab		1	3	1	CSDS042, CSDS041L, co-req CSDS072A
CSDS072A	Data Science I	2			2	CSDS042, CSDS041L, co-req CSDS071AL
CSIT141B-L-23	Software Engineering II Lab (Mobile Programming II)		1	3	1	CSIT142A, CSIT141A-L-23, co-req CSIT142B
CSIT142B	Software Engineering II	2			2	CSIT142A, CSIT141A-L-23, co-req CSIT141B-L-23 CSIT252-23, CSIT251L-23
CSIT343	Fundamentals of Information Assurance and Security	3			3	
PATHFIT4042	Contemporary Dance	2			2	PATHFIT1002, PATHFIT2022
RELED073	Contemporary Issues About Church and Human Society with Immersion	3			3	RELED053
	<b>Total</b>	<b>19</b>	<b>4</b>	<b>12</b>	<b>23</b>	
<b>THIRD YEAR, Second Semester</b>						
CSDS071BL	Data Science II Lab		1	3	1	CSDS072A, CSDS071AL, co-req CSDS072B
CSDS072B	Data Science II	2			2	CSDS072A, CSDS071AL, co-req CSDS071BL
CSElec-2	CS Elective 2	3			3	CSElec-1
CSIT191L	Operating Systems Lab		1	3	1	CSIT142B, CSIT141B-L-23, co req CSIT192
CSIT192	Operating Systems	2			2	CSIT142B, CSIT141B-L-23, co req CSIT191L
CSIT273	Automata Theory and Formal Languages	3			3	CSDS062, CSDS061L
CS-THS1	CS Thesis I	3			3	CSIT142B, CSIT141B-L-23
GEC073	Ethics	3			3	
GECELEC3	Philippine Pop Culture	3			3	
LQEC23-023	Letran Quality Enrichment Course II (21st Century Literacy Skills & Life Skills and Sustainability)	3			3	LQEC23-013
	<b>Total</b>	<b>22</b>	<b>2</b>	<b>6</b>	<b>24</b>	
<b>FOURTH YEAR, First Semester</b>						
CSElec-3	CS Elective 3	3			3	CSElec-2
CSIT183	Social Issues and Professional Practice	3			3	CSDS072B, CSDS071BL
CS-THS2	CS Thesis II	3			3	CS-THS1
GEC013	Science, Technology, and Society	3			3	
GEC023	Mga Babasahin Hinggil sa Kasaysayan ng Pilipinas	3			3	
GEC043	Contemporary World	3			3	
GECELEC2	The Entrepreneurial Mind	3			3	
RZL023	Buhay at Mga Akda ni Rizal	3			3	
	<b>Total</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	
<b>FOURTH YEAR, Second Semester</b>						
CS-PRC5	*Internship (500 hrs)	5			5	CS-THS2
	<b>Total</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	
<b>GRAND TOTAL</b>		<b>159</b>	<b>19</b>	<b>57</b>	<b>178</b>	

#### Professional Electives

Internet of Things  
BlockChain Technology  
Web Technologies  
Cybersecurity  
Cloud Computing  
Technopreneurship  
Robotic Process Automation  
Virtual Reality and Augmented Reality

\*Practicum/Internship - No simultaneous enrolment is allowed.

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