



**ARELLANO UNIVERSITY**

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

Effective SY 2018-2019

**FIRST YEAR**

**FIRST SEMESTER**

		Lec	Lab	Units	Pre-requisite	
_____	ITC 110	Introduction to Computing	2	1	3	
_____	ITC 111	Computer Programming 1	2	1	3	
_____	ITC 112	Intro to Graphics and Design	2	1	3	
_____	GCAS 05	Mathematics in the Modern World	3		3	
_____	GCAS 06	Purposive Communication	3		3	
_____	GCAS 07	Science, Technology and Society	3		3	
_____	GCAS 15	PE 1 – Movement Enhancement	2		2	
_____	GCAS 19	NSTP 1			(3)	
				<u>20</u>		

**SECOND SEMESTER**

		Lec	Lab	Units	Pre-requisite	
_____	ITC 120	Computer Programming 2	2	1	3	ITC 111
_____	ITC 121	Operating Systems	2	1	3	ITC 110, ITC 111
_____	ITC 122	Intro to Web Design	2	1	3	ITC 112
_____	GCAS 01	Art Appreciation	3		3	
_____	GCAS 02	Ethics	3		3	
_____	GCAS 04	Readings in Philippine History	3		3	
_____	GCAS 08	Understanding the Self	3		3	
_____	GCAS 16	PE 2 – Fitness Exercises	2		2	
_____	GCAS 20	NSTP 2			(3)	NSTP 1
				<u>23</u>		

**SECOND YEAR**

**FIRST SEMESTER**

		Lec	Lab	Units	Pre-requisite	
_____	ITC 123	Applications Dev't and Emerging Tech.	2	1	3	ITC 122
_____	ITC 124	Fundamentals of Database Systems	2	1	3	ITC 120
_____	ITC 125	Data Structure and Algorithms	2	1	3	ITC 120
_____	CS 210	Discrete Structure 1	3		3	GCAS 05
_____	CS 211	Object-oriented Programming	2	1	3	ITC 120
_____	STAT 01C	Probability and Statistics	3		3	GCAS 05
_____	GCAS 03	Contemporary World	3		3	
_____	GCAS 17	PE 3 – Dance/wimming	2		2	
				<u>23</u>		

**SECOND SEMESTER**

		Lec	Lab	Units	Pre-requisite	
_____	ITC 126	Information Management	3		3	ITC 124
_____	ITC 127	Advanced Database Systems	2	1	3	ITC 124
_____	CS 221	Digital Design and Electronics	2	1	3	ITC 110, CS 210
_____	CS 222	Computer Architecture	2	1	3	ITC 110, CS 210
_____	CS 223	Discrete Structures 2	3		3	CS 210
_____	CS 224	Networks and Communication	2	1	3	ITC 110, ITC 124
_____	GCAS 18	PE 4 – Team Sports	2		2	
_____	GCAS 14	World Literature	3		3	none
				<u>23</u>		

### THIRD YEAR

#### FIRST SEMESTER

		Lec	Lab	Units	Pre-requisite
_____	ITC 129				
	Computer Org (w/ Assembly Lang.)	2	1	3	CS 221
_____	CS 310				
	Software Engineering 1	3		3	ITC 127
_____	CS 311				
	Computer Programming 3	2	1	3	ITC 120
_____	CS 312				
	Algorithms and Complexity	2	1	3	ITC 125, CS 223
_____	CS 313				
	Elective 1	2	1	3	3 <sup>rd</sup> yr standing
_____	CS 314				
	Linear Algebra	3		3	CS 223
_____	GCAS 09				
	Rizal	3		3	none
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				21	

#### SECOND SEMESTER

		Lec	Lab	Units	Pre-requisite
_____	ITC 130				
	Computer Accounting (w/ SAP)	2	1	3	STAT 01C
_____	CS 320				
	Software Engineering 2	2	1	3	CS 310
_____	CS 321				
	Programming Languages	2	1	3	3 <sup>rd</sup> yr Standing
_____	CS 322				
	Elective 2	2	1	3	CS 313
_____	CS 323				
	Math Analysis	5		5	CS 314
_____	GCAS 11				
	Panitikan Pilipino	3		3	none
_____	GCAS IR				
	Community Development	3		3	3 <sup>rd</sup> yr Standing
				<hr/>	
				23	

#### SUMMER

_____	CS 330				
	Computer Practicum (486 hours)			6	Incoming 4 <sup>th</sup> yr.

### FOURTH YEAR

#### FIRST SEMESTER

		Lec	Lab	Units	Pre-requisite
_____	ITC 128				
	Social Issues and Professional Practice	3		3	4 <sup>th</sup> yr standing
_____	CS 411				
	Thesis 1	3		3	4 <sup>th</sup> yr Standing
_____	CS 412				
	Elective 3	2	1	3	CS 322
_____	CS 414				
	Automata Theory & Formal Languages	3		3	CS 223, CS 323
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				12	

#### SECOND SEMESTER

		Lec	Lab	Units	PRE-REQUISITE
_____	CS 420				
	Information Assurance and Security	3		3	4 <sup>th</sup> yr Standing
_____	CS 421				
	Thesis 2	3		3	CS 411
_____	CS 422				
	Human Computer Interaction	2	1	3	CS 311, CS 321, CS 412
_____	CS 423				
	Elective 4	2	1	3	CS 413
				<hr/>	
				12	

#### Electives: (12 units)

Systems Fundamentals  
Graphics and Visual Computing  
Computational Science

Parallel and Distributed Computing  
Intelligent Systems