

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

(Curriculum applicable to students who entered as freshmen for academic year 2015-2016)

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	1	CS11	INTRODUCTION TO COMPUTER SCIENCE	1.5	-	1.0			SOIT
		ENG10	ENGLISH FOR ACADEMIC PURPOSES 1	4.5	-	3.0			SLHS
		FIL10	FILIPINO 1	4.5	-	3.0			SLHS
		MATH10-3	ALGEBRA	4.5	-	3.0			MATH
		MATH12-1	PLANE AND SPHERICAL TRIGONOMETRY	4.5	-	3.0			MATH
		NSTP1	NATIONAL SERVICE TRAINING PROGRAM 1	-	4.5	(1.5)			SOCIP
		PE11-1	PHYSICAL EDUCATION 1 (PHYSICAL FITNESS AND GROUP GAMES)	-	3.0	(2.0)			ATHLETICS
			Total	19.5	7.5	13.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	2	CS126	PROGRAMMING 1	3.0	-	2.0			SOIT
		CS126L	PROGRAMMING LABORATORY 1	-	4.5	1.0		CS126	SOIT
		ENG11	ENGLISH FOR ACADEMIC PURPOSES 2	4.5	-	3.0	ENG10		SLHS
		FIL11	FILIPINO 2	4.5	-	3.0			SLHS
		MATH10-4	ADVANCED ALGEBRA	4.5	-	3.0	MATH10-3		MATH
		SSE01	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
		NSTP2	NATIONAL SERVICE TRAINING PROGRAM 2	-	4.5	(1.5)	NSTP1		SOCIP
		PE12	PHYSICAL EDUCATION 2 (DANCE, MARTIAL ARTS AND BOARD GAMES)	-	3.0	(2.0)			ATHLETICS
Total			21.0	4.5	15.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	3	CS127	PROGRAMMING 2	3.0	-	2.0	CS126, CS126L		SOIT
		CS127L	PROGRAMMING LABORATORY 2	-	4.5	1.0	CS126, CS126L	CS127	SOIT
		HME01	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		MATH21-1	CALCULUS 1	7.5	-	5.0	MATH10-4, MATH12-1		MATH
		PHY10-1	COLLEGE PHYSICS 1	4.5	-	3.0	MATH10-4, MATH12-1		PHYSICS
		PHY10-1L	COLLEGE PHYSICS LABORATORY 1	-	4.5	1.0	MATH10-4, MATH12-1	PHY10-1	PHYSICS

	NSTP3	NATIONAL SERVICE TRAINING PROGRAM 3	-	4.5	(1.5)	NSTP2		SOCIP
	PE13-2	PHYSICAL EDUCATION 3 (INDIVIDUAL / DUAL SPORTS)	-	3.0	(2.0)			ATHLETICS
Total			19.5	9.0	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	4	CS130	WEB APPLICATION AND DESIGN	3.0	-	2.0	CS126, CS126L		SOIT
		CS130L	WEB APPLICATION AND DESIGN LABORATORY	-	4.5	1.0	CS126, CS126L	CS130	SOIT
		MATH22-1	CALCULUS 2	7.5	-	5.0	MATH21-1		MATH
		PHY11-1	COLLEGE PHYSICS 2	4.5	-	3.0	PHY10-1, PHY10-1L		PHYSICS
		PHY11-1L	COLLEGE PHYSICS LABORATORY 2	-	4.5	1.0	PHY10-1, PHY10-1L	PHY11-1	PHYSICS
		RZL10	RIZAL'S WORKS & WRITINGS OF OTHER FILIPINO HEROES	4.5	-	3.0			SLHS
		NSTP4	NATIONAL SERVICE TRAINING PROGRAM 4	-	4.5	(1.5)	NSTP3		SOCIP
		PE14	PHYSICAL EDUCATION 4 (TEAM SPORTS)	-	3.0	(2.0)			ATHLETICS
			Total	19.5	9.0	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	1	ENG12	ENGLISH FOR THE WORKPLACE 1	4.5	-	3.0	ENG11		SLHS
		IT160	LOGIC CIRCUITS AND DIGITAL DESIGN	3.0	-	2.0	PHY11-1		SOIT
		IT160L	LOGIC CIRCUITS AND DIGITAL DESIGN LABORATORY	-	4.5	1.0	PHY11-1	IT160	SOIT
		IT184L	DATA COMMUNICATIONS 1	-	9.0	2.0	CS126, 2nd Year Standing		SOIT
		MATH15-2	LINEAR ALGEBRA	3.0	-	2.0	MATH10-4, 2nd Year Standing		MATH
		MATH16-L	INTRODUCTION TO SCIENTIFIC COMPUTING	-	4.5	1.0	MATH22-1, 2nd Year Standing		MATH
		MATH30-10	PROBABILITY AND STATISTICS	4.5	-	3.0	MATH22-1		MATH
			Total	15.0	18.0	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	2	CS128	PROGRAMMING 3	3.0	-	2.0	CS127, CS127L		SOIT
		CS128L	PROGRAMMING LABORATORY 3	-	4.5	1.0	CS127, CS127L	CS128	SOIT
		CS133	DATA STRUCTURES AND FILE ORGANIZATION	4.5	-	3.0	CS127, CS127L		SOIT
		CS137	DISCRETE MATHEMATICS	4.5	-	3.0	MATH10-4		SOIT
		IT185L	DATA COMMUNICATIONS 2	-	9.0	2.0	IT184L		SOIT
		SSE02	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
			Total	16.5	13.5	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	3	BIO105	BIOLOGICAL PRINCIPLES FOR THE COMPUTATIONAL SCIENCES	4.5	-	3.0			CHE-CHM
		CS143	HUMAN COMPUTER INTERACTION	4.5	-	3.0	CS130, CS130L		SOIT
		HME02	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		IT150	COMPUTER SYSTEM ORGANIZATION AND ARCHITECTURE	3.0	-	2.0	CS127, CS127L		SOIT
		IT153L	COMPUTER SYSTEM WITH ASSEMBLY LANGUAGE LABORATORY	-	4.5	1.0	CS127, CS127L	IT150	SOIT
		IT186L	COMPUTER NETWORKS 1	-	9.0	2.0	IT185L		SOIT
			Total	16.5	13.5	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	4	CS129	PROGRAMMING 4	3.0	-	2.0	CS128, CS128L, CS133		SOIT
		CS129L	PROGRAMMING LABORATORY 4	-	4.5	1.0	CS128, CS128L, CS133	CS129	SOIT
		CS141	DESIGN AND ANALYSIS OF ALGORITHMS	4.5	-	3.0	CS133		SOIT
		HME03	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		IT131	DATABASE MANAGEMENT SYSTEM	3.0	-	2.0	CS128, CS128L		SOIT
		IT131L	DATABASE MANAGEMENT SYSTEM LABORATORY	-	4.5	1.0	CS128, CS128L	IT131	SOIT
		IT187L	COMPUTER NETWORKS 2	-	9.0	2.0	IT186L		SOIT
			Total	15.0	18.0	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	1	BIO106L	INTRODUCTION TO BIOINFORMATICS LABORATORY	-	4.5	1.0	BIO105		CHE-CHM
		CS142	AUTOMATA AND LANGUAGE THEORY	4.5	-	3.0	IT131, CS137		SOIT

	CS144	MODELING AND SIMULATION THEORY	4.5	-	3.0	CS137		SOIT
	CS146	NUMERICAL METHODS	4.5	-	3.0	MATH22-1		SOIT
	IT132	SYSTEMS ANALYSIS AND DESIGN	3.0	-	2.0	IT131, IT131L		SOIT
	IT132L	SYSTEMS ANALYSIS AND DESIGN LABORATORY	-	4.5	1.0	IT131, IT131L	IT132	SOIT
		FREE ELECTIVE 1			3.0	3rd Year Standing		
Total			16.5	9.0	16.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	2	CS145	STRUCTURE OF PROGRAMMING LANGUAGES	3.0	-	2.0	CS129, CS129L		SOIT
		CS145L	STRUCTURE OF PROGRAMMING LANGUAGES LABORATORY	-	4.5	1.0	CS129, CS129L	CS145	SOIT
		CS200	THESIS 1	3.0	-	2.0		RES100-3	SOIT
		ENG13	ENGLISH FOR THE WORKPLACE 2	4.5	-	3.0	ENG12		SLHS
		IT155	SOFTWARE ENGINEERING	3.0	-	2.0	IT132, IT132L		SOIT
		IT155L	SOFTWARE ENGINEERING LABORATORY	-	4.5	1.0	IT132, IT132L	IT155	SOIT
		RES100-3	METHODS OF RESEARCH	3.0	-	2.0	CS141, 3rd Year Standing		SOIT
			PROFESSIONAL ELECTIVE 1			3.0	3rd Year Standing		
Total				16.5	9.0	16.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	3	CS200-1	THESIS 2	3.0	-	2.0	CS200		SOIT
		IT134	INFORMATION SYSTEMS AND BUSINESS PROCESSES	4.5	-	3.0	IT131		SOIT
		IT139	IT PROJECT MANAGEMENT	4.5	-	3.0	IT155		SOIT
		IT154	PRINCIPLES OF OPERATING SYSTEMS	3.0	-	2.0	IT150, IT153L		SOIT
		IT154L	PRINCIPLES OF OPERATING SYSTEMS LABORATORY	-	4.5	1.0	IT150, IT153L	IT154	SOIT
			PROFESSIONAL ELECTIVE 2			3.0	Professional Elective 1		
Total			15.0	4.5	14.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	4	CS136	SOFTWARE QUALITY	4.5	-	3.0	IT155		SOIT
		IT145	PROFESSIONAL ETHICS FOR IT PRACTITIONERS	4.5	-	3.0	IT134, IT155		SOIT
		SSE03	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS

		FREE ELECTIVE 2			3.0	3rd Year Standing		
		PROFESSIONAL ELECTIVE 3			3.0	Professional Elective 2		
Total			13.5	0.0	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
4	1	CS199R	CS PRACTICUM	-	24.0	3.0	For Graduating Students Only		SOIT
		CS200-2	THESIS 3	3.0	-	2.0	CS200-1		SOIT
		IT136F	IT SEMINARS	-	4.5	1.0	For Graduating Students Only		SOIT
		SSE04	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
			FREE ELECTIVES 3			3.0	3rd Year Standing		
			PROFESSIONAL ELECTIVE 4			3.0	Professional Elective 3		
Total				7.5	28.5	15.0			

PROFESSIONAL ELECTIVES : 12.00 units

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
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.NET PROGRAMMING TRACK

3	2	IT190P	MICROSOFT.NET TECHNOLOGY 1	3.0	4.5	3.0	IT131, IT131L		SOIT
3	3	IT191P	MICROSOFT.NET TECHNOLOGY 2	3.0	4.5	3.0	IT190P		SOIT
3	4	IT192P	MICROSOFT.NET TECHNOLOGY 3	3.0	4.5	3.0	IT191P		SOIT
4	1	IT193P	MICROSOFT.NET TECHNOLOGY 4	3.0	4.5	3.0	IT192P		SOIT
Total				12.0	18.0	12.0			

BUSINESS ANALYTICS TRACK

3	2	IS196	BUSINESS ANALYTICS 1	4.5	-	3.0	IT131, IT131L		SOIT
3	3	IS197	BUSINESS ANALYTICS 2	4.5	-	3.0	IS196		SOIT
3	4	IS198	BUSINESS ANALYTICS 3	4.5	-	3.0	IS197		SOIT
4	1	IS199	BUSINESS ANALYTICS 4	4.5	-	3.0	IS198		SOIT
Total				18.0	0.0	12.0			

CISCO NETWORKING TRACK

3	2	IT171P	ADVANCED INTERNET PROTOCOL NETWORKING 1	3.0	4.5	3.0	IT187L		CCESC
3	3	IT172P	ADVANCED INTERNET PROTOCOL NETWORKING 2	3.0	4.5	3.0	IT171P		CCESC

3	4	IT173P	ADVANCED INTERNET PROTOCOL NETWORKING 3	3.0	4.5	3.0	IT172P		CCESC
4	1	IT174P	ADVANCED INTERNET PROTOCOL NETWORKING 4	3.0	4.5	3.0	IT173P		CCESC
Total				12.0	18.0	12.0			

COBOL TRACK

3	2	CS195P	COBOL PROGRAMMING 1	3.0	4.5	3.0	IT131, IT131L		SOIT
3	3	CS196P	COBOL PROGRAMMING 2	3.0	4.5	3.0	CS195P		SOIT
3	4	CS197P	COBOL PROGRAMMING 3	3.0	4.5	3.0	CS196P		SOIT
4	1	CS198P	COBOL PROGRAMMING 4	3.0	4.5	3.0	CS197P		SOIT
Total				12.0	18.0	12.0			

DATA MANAGEMENT TRACK

3	2	IS186	DATA MANAGEMENT 1	4.5	-	3.0	IT131, IT131L		SOIT
3	3	IS187	DATA MANAGEMENT 2	4.5	-	3.0	IS186		SOIT
3	4	IS188	DATA MANAGEMENT 3	4.5	-	3.0	IS187		SOIT
4	1	IS189	DATA MANAGEMENT 4	4.5	-	3.0	IS188		SOIT
Total				18.0	0.0	12.0			

HP-UX ADMINISTRATION TRACK

3	2	IT180P	HP-UX ADMINISTRATION 1	3.0	4.5	3.0	IT131, IT131L		CCESC
3	3	IT181P	HP-UX ADMINISTRATION 2	3.0	4.5	3.0	IT180P		CCESC
3	4	IT182P	HP-UX ADMINISTRATION 3	3.0	4.5	3.0	IT181P		CCESC
4	1	IT183P	HP-UX ADMINISTRATION 4	3.0	4.5	3.0	IT182P		CCESC
Total				12.0	18.0	12.0			

JAVA PROGRAMMING TRACK

3	2	CS181P	JAVA PROGRAMMING 1	3.0	4.5	3.0	IT131, IT131L		SOIT
3	3	CS182P	JAVA PROGRAMMING 2	3.0	4.5	3.0	CS181P		SOIT
3	4	CS183P	JAVA PROGRAMMING 3	3.0	4.5	3.0	CS182P		SOIT
4	1	CS184P	JAVA PROGRAMMING 4	3.0	4.5	3.0	CS183P		SOIT
Total				12.0	18.0	12.0			

FREE ELECTIVES : 9.00 units

	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co- requisites	Caretaker
	CS150	KNOWLEDGE MANAGEMENT	4.5	-	3.0			SOIT
	CS151	EMBEDDED SYSTEMS	4.5	-	3.0			SOIT
	CS153P	INTRODUCTION TO GAME PROGRAMMING	3.0	4.5	3.0			SOIT
	CS154	INFORMATION SECURITY	4.5	-	3.0			SOIT
	CS155P	3D ANIMATION AND MODELLING	3.0	4.5	3.0			SOIT
	CS156	INTRODUCTION TO CLOUD COMPUTING	4.5	-	3.0			SOIT
	CS157	DATA MINING	4.5	-	3.0	CS141, MATH30-10		SOIT
	CS158	ARTIFICIAL INTELLIGENCE	4.5	-	3.0	CS128, CS133		SOIT
	CS159	PATTERN RECOGNITION	4.5	-	3.0	CS128, CS141, MATH30-10		SOIT
	IS185	ESSENTIAL OF SAS	4.5	-	3.0			SOIT
	IT170	IT INFRASTRUCTURE LIBRARY FOUNDATION COURSE	4.5	-	3.0			SOIT
	IT171	FUNDAMENTALS OF SAP	4.5	-	3.0			SOIT
	IT172	MOBILE APPLICATION DEVELOPMENT	4.5	-	3.0	CS128, CS133		SOIT

Total Academic Units : 190.00

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

(Curriculum applicable to students who entered as freshmen for academic year 2015-2016)

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	1	ENG10	ENGLISH FOR ACADEMIC PURPOSES 1	4.5	-	3.0			SLHS
		FIL10	FILIPINO 1	4.5	-	3.0			SLHS
		IT101	INTRODUCTION TO INFORMATION TECHNOLOGY	1.5	-	1.0			SOIT
		MATH10-5	ALGEBRA	4.5	-	3.0			MATH
		MATH12-5	PLANE TRIGONOMETRY	4.5	-	3.0			MATH
		NSTP1	NATIONAL SERVICE TRAINING PROGRAM 1	-	4.5	(1.5)			SOCIP
		PE11-1	PHYSICAL EDUCATION 1 (PHYSICAL FITNESS AND GROUP GAMES)	-	3.0	(2.0)			ATHLETICS
			Total	19.5	7.5	13.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	2	CS126	PROGRAMMING 1	3.0	-	2.0			SOIT
		CS126L	PROGRAMMING LABORATORY 1	-	4.5	1.0		CS126	SOIT
		ENG11	ENGLISH FOR ACADEMIC PURPOSES 2	4.5	-	3.0	ENG10		SLHS
		FIL11	FILIPINO 2	4.5	-	3.0			SLHS
		MATH10-6	ADVANCED ALGEBRA	4.5	-	3.0	MATH10-5		MATH
		SSE01	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
		NSTP2	NATIONAL SERVICE TRAINING PROGRAM 2	-	4.5	(1.5)	NSTP1		SOCIP
		PE12	PHYSICAL EDUCATION 2 (DANCE, MARTIAL ARTS AND BOARD GAMES)	-	3.0	(2.0)			ATHLETICS
Total			21.0	12.0	15.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	3	CS127	PROGRAMMING 2	3.0	-	2.0	CS126, , CS126L		SOIT
		CS127L	PROGRAMMING LABORATORY 2	-	4.5	1.0	CS126, , CS126L	CS127	SOIT
		CS130	WEB APPLICATION AND DESIGN	3.0	-	2.0	CS126, , CS126L		SOIT
		CS130L	WEB APPLICATION AND DESIGN LABORATORY	-	4.5	1.0	CS126, , CS126L	CS130	SOIT
		HME01	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		MATH14-1	PLANE AND SOLID ANALYTIC GEOMETRY	4.5	-	3.0	MATH10-6, MATH12-5		MATH
		SSE02	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS

	NSTP3	NATIONAL SERVICE TRAINING PROGRAM 3	-	4.5	(1.5)	NSTP2		SOCIP
	PE13-2	PHYSICAL EDUCATION 3 (INDIVIDUAL / DUAL SPORTS)	-	3.0	(2.0)			ATHLETICS
Total			19.5	16.5	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	4	CS128	PROGRAMMING 3	3.0	-	2.0	CS127,, CS127L		SOIT
		CS128L	PROGRAMMING LABORATORY 3	-	4.5	1.0	CS127,, CS127L	CS128	SOIT
		ENG12	ENGLISH FOR THE WORKPLACE 1	4.5	-	3.0	ENG11		SLHS
		IT137	MULTIMEDIA	3.0	-	2.0	CS130, CS130L		SOIT
		IT137L	MULTIMEDIA LABORATORY	-	4.5	1.0	CS130L, CS130	IT137	SOIT
		IT152L	COMPUTER HARDWARE AND TROUBLESHOOTING LABORATORY	-	4.5	1.0	CS126		SOIT
		MATH21-2	CALCULUS 1	4.5	-	3.0	MATH14-1		MATH
		RZL10	RIZAL'S WORKS & WRITINGS OF OTHER FILIPINO HEROES	4.5	-	3.0			
		NSTP4	NATIONAL SERVICE TRAINING PROGRAM 4	-	4.5	(1.5)	NSTP3		SOCIP
PE14	PHYSICAL EDUCATION 4 (TEAM SPORTS)	-	3.0	(2.0)			ATHLETICS		
		Total	19.5	21.0	16.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	1	CS133	DATA STRUCTURES AND FILE ORGANIZATION	4.5	-	3.0	CS127, , CS127L		SOIT
		IT184L	DATA COMMUNICATIONS 1	-	9.0	2.0	CS126		SOIT
		MATH15-3	LINEAR ALGEBRA	3.0	-	2.0	MATH10-6,2nd Year Standing		MATH
		MATH22-2	CALCULUS 2	4.5	-	3.0	MATH21-2		MATH
		PHY10-1	COLLEGE PHYSICS 1	4.5	-	3.0	MATH10-6, MATH12-5		PHYSICS
		PHY10-1L	COLLEGE PHYSICS LABORATORY 1	-	4.5	1.0	MATH10-6, MATH12-5	PHY10-1	PHYSICS
Total			16.5	13.5	14.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	2	CS137	DISCRETE MATHEMATICS	4.5	-	3.0	MATH10-6		SOIT
		IT185L	DATA COMMUNICATIONS 2	-	9.0	2.0	IT184L		SOIT
		MATH16-L	INTRODUCTION TO SCIENTIFIC COMPUTING	-	4.5	1.0	MATH22-2		MATH
		MATH30-11	PROBABILITY AND STATISTICS	4.5	-	3.0	MATH22-2		MATH

	PHY11-1	COLLEGE PHYSICS 2	4.5	-	3.0	PHY10-1, PHY10-1L		PHYSICS
	PHY11-1L	COLLEGE PHYSICS LABORATORY 2	-	4.5	1.0	PHY10-1, PHY10-1L	PHY11-1	PHYSICS
	SSE03	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
Total			18.0	18.0	16.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co- requisites	Caretaker
2	3	CS143	HUMAN COMPUTER INTERACTION	4.5	-	3.0	CS130, CS130L		SOIT
		HME02	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		IT131	DATABASE MANAGEMENT SYSTEM	3.0	-	2.0	CS128, , CS128L		SOIT
		IT131L	DATABASE MANAGEMENT SYSTEM LABORATORY	-	4.5	1.0	CS128, , CS128L	IT131	SOIT
		IT150	COMPUTER SYSTEM ORGANIZATION AND ARCHITECTURE	3.0	-	2.0	CS127, , CS127L		SOIT
		IT186L	COMPUTER NETWORKS 1	-	9.0	2.0	IT185L		SOIT
		MGT109-1	PRINCIPLES OF ACCOUNTING	4.5	-	3.0	MATH22-2		ETYSBM
			Total	19.5	13.5	16.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co- requisites	Caretaker
2	4	CS129	PROGRAMMING 4	3.0	-	2.0	CS128, , CS128L, , CS133		SOIT
		CS129L	PROGRAMMING LABORATORY 4	-	4.5	1.0	CS128, , CS128L, , CS133	CS129	SOIT
		HME03	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		IT132	SYSTEMS ANALYSIS AND DESIGN	3.0	-	2.0	IT131, IT131L		SOIT
		IT132L	SYSTEMS ANALYSIS AND DESIGN LABORATORY	-	4.5	1.0	IT131, IT131L	IT132	SOIT
		IT153L	COMPUTER SYSTEM WITH ASSEMBLY LANGUAGE LABORATORY	-	4.5	1.0	CS127, , CS127L		SOIT
		IT160	LOGIC CIRCUITS AND DIGITAL DESIGN	3.0	-	2.0	PHY11-1		SOIT
		IT160L	LOGIC CIRCUITS AND DIGITAL DESIGN LABORATORY	-	4.5	1.0	PHY11-1	IT160	SOIT
		IT187L	COMPUTER NETWORKS 2	-	9.0	2.0	IT186L		SOIT
			Total	13.5	27.0	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co- requisites	Caretaker
3	1	ENG13	ENGLISH FOR THE WORKPLACE 2	4.5	-	3.0	ENG12		SLHS
		IT133	ADVANCED DATA MANAGEMENT	3.0	-	2.0	IT132, IT132L		SOIT
		IT133L	ADVANCED DATA MANAGEMENT LABORATORY	-	4.5	1.0	IT132, IT132L	IT133	SOIT
		IT154	PRINCIPLES OF OPERATING	3.0	-	2.0	IT150, IT153L		SOIT

		SYSTEMS						
	IT154L	PRINCIPLES OF OPERATING SYSTEMS LABORATORY	-	4.5	1.0	IT150, IT153L	IT154	SOIT
	IT155	SOFTWARE ENGINEERING	3.0	-	2.0	IT132, IT132L		SOIT
	IT155L	SOFTWARE ENGINEERING LABORATORY	-	4.5	1.0	IT132, IT132L	IT155	SOIT
		FREE ELECTIVE 1			3.0	3rd Year Standing		
Total			13.5	13.5	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	2	IT134	INFORMATION SYSTEMS AND BUSINESS PROCESSES	4.5	-	3.0	IT131		SOIT
		IT135	E-COMMERCE	3.0	-	2.0	IT133, IT133L		SOIT
		IT135L	E-COMMERCE LABORATORY	-	4.5	1.0	IT133, IT133L	IT135	SOIT
		IT200	CAPSTONE PROJECT 1	1.5	-	1.0	IT155	IT110	SOIT
		IT110	IT RESEARCH METHODS	3.0	-	2.0			SOIT
		SSE04	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
			PROFESSIONAL ELECTIVE 1			3.0	3rd Year Standing		
			Total	16.5	4.5	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	3	CS136	SOFTWARE QUALITY	4.5	-	3.0	IT155		SOIT
		IT139	IT PROJECT MANAGEMENT	4.5	-	3.0	IT155		SOIT
		IT199R	PRACTICUM 1	-	24.0	3.0	IT134, IT155		SOIT
		IT200-1	CAPSTONE PROJECT 2	1.5	-	1.0	IT200		SOIT
			PROFESSIONAL ELECTIVE 2			3.0	Professional Elective 1		
			Total	10.5	24.0	13.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	4	IT140	NETWORK MANAGEMENT	3.0	-	2.0	IT187L		SOIT
		IT140L	NETWORK MANAGEMENT LABORATORY	-	4.5	1.0	IT187L	IT140	SOIT
		IT145	PROFESSIONAL ETHICS FOR IT PRACTITIONERS	4.5	-	3.0	IT134, IT155		SOIT
		IT199-1R	PRACTICUM 2	-	24.0	3.0	IT199R		SOIT
		IT200-2	CAPSTONE PROJECT 3	1.5	-	1.0	IT200-1		SOIT
			FREE ELECTIVE 2			3.0	3rd Year Standing		
			PROFESSIONAL ELECTIVE 3			3.0	Professional Elective 2		
			Total	9.0	28.5	16.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
4	1	IT136F	IT SEMINARS	-	4.5	1.0	For Graduating Students Only		SOIT
		IT199-2R	PRACTICUM 3	-	24.0	3.0	IT199-1R		SOIT
			FREE ELECTIVE 3			3.0	3rd Year Standing		
			PROFESSIONAL ELECTIVE 4			3.0	Professional Elective 3		
Total				0.0	28.5	10.0			

PROFESSIONAL ELECTIVES : 12.00 units

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
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.NET PROGRAMMING TRACK

3	2	IT190P	MICROSOFT.NET TECHNOLOGY 1	3.0	4.5	3.0	IT131, , IT131L		SOIT
3	3	IT191P	MICROSOFT.NET TECHNOLOGY 2	3.0	4.5	3.0	IT190P		SOIT
3	4	IT192P	MICROSOFT.NET TECHNOLOGY 3	3.0	4.5	3.0	IT191P		SOIT
4	1	IT193P	MICROSOFT.NET TECHNOLOGY 4	3.0	4.5	3.0	IT192P		SOIT
Total				12.0	18.0	12.0			

BUSINESS ANALYTICS TRACK

3	2	IS196	BUSINESS ANALYTICS 1	4.5	-	3.0	IT131, , IT131L		SOIT
3	3	IS197	BUSINESS ANALYTICS 2	4.5	-	3.0	IS196		SOIT
3	4	IS198	BUSINESS ANALYTICS 3	4.5	-	3.0	IS197		SOIT
4	1	IS199	BUSINESS ANALYTICS 4	4.5	-	3.0	IS198		SOIT
Total				18.0	0.0	12.0			

CISCO NETWORKING TRACK

3	2	IT171P	ADVANCED INTERNET PROTOCOL NETWORKING 1	3.0	4.5	3.0	IT187L		CCESC
3	3	IT172P	ADVANCED INTERNET PROTOCOL NETWORKING 2	3.0	4.5	3.0	IT171P		CCESC
3	4	IT173P	ADVANCED INTERNET PROTOCOL NETWORKING 3	3.0	4.5	3.0	IT172P		CCESC
4	1	IT174P	ADVANCED INTERNET PROTOCOL NETWORKING 4	3.0	4.5	3.0	IT173P		CCESC
Total				12.0	18.0	12.0			

COBOL TRACK

3	2	CS195P	COBOL PROGRAMMING 1	3.0	4.5	3.0	IT131, , IT131L		SOIT
3	3	CS196P	COBOL PROGRAMMING 2	3.0	4.5	3.0	CS195P		SOIT

3	4	CS197P	COBOL PROGRAMMING 3	3.0	4.5	3.0	CS196P		SOIT
4	1	CS198P	COBOL PROGRAMMING 4	3.0	4.5	3.0	CS197P		SOIT
Total				12.0	18.0	12.0			

DATA MANAGEMENT TRACK

3	2	IS186	DATA MANAGEMENT 1	4.5	-	3.0	IT131, , IT131L		SOIT
3	3	IS187	DATA MANAGEMENT 2	4.5	-	3.0	IS186		SOIT
3	4	IS188	DATA MANAGEMENT 3	4.5	-	3.0	IS187		SOIT
4	1	IS189	DATA MANAGEMENT 4	4.5	-	3.0	IS188		SOIT
Total				18.0	0.0	12.0			

HP-UX ADMINISTRATION TRACK

3	2	IT180P	HP-UX ADMINISTRATION 1	3.0	4.5	3.0	IT131, , IT131L		CCESC
3	3	IT181P	HP-UX ADMINISTRATION 2	3.0	4.5	3.0	IT180P		CCESC
3	4	IT182P	HP-UX ADMINISTRATION 3	3.0	4.5	3.0	IT181P		CCESC
4	1	IT183P	HP-UX ADMINISTRATION 4	3.0	4.5	3.0	IT182P		CCESC
Total				12.0	18.0	12.0			

JAVA PROGRAMMING TRACK

3	2	CS181P	JAVA PROGRAMMING 1	3.0	4.5	3.0	IT131, , IT131L		SOIT
3	3	CS182P	JAVA PROGRAMMING 2	3.0	4.5	3.0	CS181P		SOIT
3	4	CS183P	JAVA PROGRAMMING 3	3.0	4.5	3.0	CS182P		SOIT
4	1	CS184P	JAVA PROGRAMMING 4	3.0	4.5	3.0	CS183P		SOIT
Total				12.0	18.0	12.0			

FREE ELECTIVES : 9.00 units

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
		CS150	KNOWLEDGE MANAGEMENT	4.5	-	3.0			SOIT
		CS151	EMBEDDED SYSTEMS	4.5	-	3.0			SOIT
		CS153P	INTRODUCTION TO GAME PROGRAMMING	3.0	4.5	3.0			SOIT
		CS154	INFORMATION SECURITY	4.5	-	3.0			SOIT
		CS155P	3D ANIMATION AND MODELLING	3.0	4.5	3.0			SOIT
		CS156	INTRODUCTION TO CLOUD COMPUTING	4.5	-	3.0			SOIT
		IS185	ESSENTIAL OF SAS	4.5	-	3.0			SOIT
		IT170	IT INFRASTRUCTURE LIBRARY FOUNDATION COURSE	4.5	-	3.0			SOIT
		IT171	FUNDAMENTALS OF SAP	4.5	-	3.0			SOIT
		IT172	MOBILE APPLICATION DEVELOPMENT	4.5	-	3.0	CS128, CS133		SOIT

Total Academic Units : 189.00

BACHELOR OF SCIENCE IN INFORMATION SYSTEMS

(Curriculum applicable to students who entered as freshmen for academic year 2015-2016)

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	1	ENG10	ENGLISH FOR ACADEMIC PURPOSES 1	4.5	-	3.0			SLHS
		FIL10	FILIPINO 1	4.5	-	3.0			SLHS
		IS100	FUNDAMENTALS OF INFORMATION SYSTEMS	4.5	-	3.0			SOIT
		MATH10-2	ALGEBRA	4.5	-	3.0			MATH
		NSTP1	NATIONAL SERVICE TRAINING PROGRAM 1	-	4.5	(1.5)			SOCIP
		PE11-1	PHYSICAL EDUCATION 1 (PHYSICAL FITNESS AND GROUP GAMES)	-	3.0	(2.0)			ATHLETICS
			Total	18.0	7.5	12.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	2	CS126	PROGRAMMING 1	3.0	-	2.0			SOIT
		CS126L	PROGRAMMING LABORATORY 1	-	4.5	1.0		CS126	SOIT
		ENG11	ENGLISH FOR ACADEMIC PURPOSES 2	4.5	-	3.0	ENG10		SLHS
		FIL11	FILIPINO 2	4.5	-	3.0			SLHS
		MATH11-2	BUSINESS AND INVESTMENT MATH	4.5	-	3.0	MATH10-2		MATH
		SSE01	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
		NSTP2	NATIONAL SERVICE TRAINING PROGRAM 2	-	4.5	(1.5)	NSTP1		SOCIP
		PE12	PHYSICAL EDUCATION 2 (DANCE, MARTIAL ARTS AND BOARD GAMES)	-	3.0	(2.0)			ATHLETICS
		Total	21.0	12.0	15.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	3	CS127	PROGRAMMING 2	3.0	-	2.0	CS126, CS126L		SOIT
		CS127L	PROGRAMMING LABORATORY 2	-	4.5	1.0	CS126, CS126L	CS127	SOIT
		HME01	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		MATH15-4	LINEAR ALGEBRA	3.0	-	2.0	MATH10-2		MATH
		MGT109-1	PRINCIPLES OF ACCOUNTING	4.5	-	3.0	MATH11-2		ETYSBM
		SSE02	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
		NSTP3	NATIONAL SERVICE TRAINING PROGRAM 3	-	4.5	(1.5)	NSTP2		SOCIP
		PE13-2	PHYSICAL EDUCATION 3 (INDIVIDUAL / DUAL SPORTS)	-	3.0	(2.0)			ATHLETICS
Total			19.5	12.0	14.0				

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
1	4	CS128-2	PROGRAMMING 3	3.0	-	2.0	CS127, , CS127L		SOIT
		CS128-2L	PROGRAMMING LABORATORY 3	-	4.5	1.0	CS127, , CS127L	CS128-2	SOIT
		IS110	PRINCIPLES OF BUSINESS AND MANAGEMENT	4.5	-	3.0	IS100		SOIT
		MATH30-12	PROBABILITY AND STATISTICS	4.5	-	3.0	MATH15-4		MATH
		RZL10	RIZAL'S WORKS & WRITINGS OF OTHER FILIPINO HEROES	4.5	-	3.0			SLHS
		SSE03	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
		NSTP4	NATIONAL SERVICE TRAINING PROGRAM 4	-	4.5	(1.5)	NSTP3		SOCIP
		PE14	PHYSICAL EDUCATION 4 (TEAM SPORTS)	-	3.0	(2.0)			ATHLETICS
			Total	21.0	12.0	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	1	CS130	WEB APPLICATION AND DESIGN	3.0	-	2.0	CS126, , CS126L		SOIT
		CS130L	WEB APPLICATION AND DESIGN LABORATORY	-	4.5	1.0	CS126, , CS126L	CS130	SOIT
		CS133	DATA STRUCTURES AND FILE ORGANIZATION	4.5	-	3.0	CS127, , CS127L		SOIT
		ENG12	ENGLISH FOR THE WORKPLACE 1	4.5	-	3.0	ENG11		SLHS
		IS115	IT AND BUSINESS PROCESS MANAGEMT	4.5	-	3.0	IS110		SOIT
		IT184L	DATA COMMUNICATIONS 1	-	9.0	2.0	CS126		SOIT
			Total	16.5	13.5	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	2	CS137	DISCRETE MATHEMATICS	4.5	-	3.0	MATH10-2		SOIT
		IT137	MULTIMEDIA	3.0	-	2.0	CS130, CS130L		SOIT
		IT137L	MULTIMEDIA LABORATORY	-	4.5	1.0	CS130L, CS130	IT137	SOIT
		IT185L	DATA COMMUNICATIONS 2	-	9.0	2.0	IT184L		SOIT
		MATH26	QUANTITATIVE METHODS FOR BUSINESS	4.5	-	3.0	MATH30-12		MATH
		SSE04	SOCIAL SCIENCE ELECTIVE	4.5	-	3.0			SLHS
			Total	16.5	13.5	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	3	BIO10	FUNDAMENTALS OF BIOLOGY	4.5	-	3.0	MATH10-2		CHE-CHM
		HME02	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS

	IT131	DATABASE MANAGEMENT SYSTEM	3.0	-	2.0	CS128-2, , CS128-2L		SOIT
	IT131L	DATABASE MANAGEMENT SYSTEM LABORATORY	-	4.5	1.0	CS128-2, , CS128-2L	IT131	SOIT
	IT150	COMPUTER SYSTEM ORGANIZATION AND ARCHITECTURE	3.0	-	2.0	CS127, , CS127L		SOIT
	IT153L	COMPUTER SYSTEM WITH ASSEMBLY LANGUAGE LABORATORY	-	4.5	1.0	CS127, , CS127L	IT150	SOIT
	IT186L	COMPUTER NETWORKS 1	-	9.0	2.0	IT185L		SOIT
Total			15.0	18.0	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
2	4	HME03	HUMANITIES ELECTIVE	4.5	-	3.0			SLHS
		IT132	SYSTEMS ANALYSIS AND DESIGN	3.0	-	2.0	IT131, IT131L		SOIT
		IT132L	SYSTEMS ANALYSIS AND DESIGN LABORATORY	-	4.5	1.0	IT131, IT131L	IT132	SOIT
		IT154	PRINCIPLES OF OPERATING SYSTEMS	3.0	-	2.0	IT150, IT153L		SOIT
		IT154L	PRINCIPLES OF OPERATING SYSTEMS LABORATORY	-	4.5	1.0	IT150, IT153L	IT154	SOIT
		IT187L	COMPUTER NETWORKS 2	-	9.0	2.0	IT186L		SOIT
		MSE001	INTRODUCTION TO MATERIALS SCIENCE	4.5	-	3.0	MATH10-2		CHE-CHM
			Total	15.0	18.0	14.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	1	ENG13	ENGLISH FOR THE WORKPLACE 2	4.5	-	3.0	ENG12		SLHS
		IS120	INFORMATION SYSTEMS PLANNING	4.5	-	3.0	IS115, IT132, IT132L		SOIT
		IT133	ADVANCED DATA MANAGEMENT	3.0	-	2.0	IT132, IT132L		SOIT
		IT133L	ADVANCED DATA MANAGEMENT LABORATORY	-	4.5	1.0	IT132, IT132L	IT133	SOIT
		IT155	SOFTWARE ENGINEERING	3.0	-	2.0	IT132, IT132L		SOIT
		IT155L	SOFTWARE ENGINEERING LABORATORY	-	4.5	1.0	IT132, IT132L	IT155	SOIT
			FREE ELECTIVE 1			3.0			
			Total	15.0	9.0	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	2	IS125	INFORMATION SYSTEMS MANAGEMENT	4.5	-	3.0	IS120		SOIT
		IT135	E-COMMERCE	3.0	-	2.0	IT133, IT133L		SOIT
		IT135L	E-COMMERCE LABORATORY	-	4.5	1.0	IT133, IT133L	IT135	SOIT
		IT139	IT PROJECT MANAGEMENT	4.5	-	3.0	IT155, IT155L		SOIT

	IT200	CAPSTONE PROJECT 1	1.5	-	1.0	IT155	IT110	SOIT
	IT110	IT RESEARCH METHODS	3.0	-	2.0			SOIT
		PROFESSIONAL ELECTIVE 1			3.0	3rd Year Standing		
Total			16.5	4.5	15.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	3	IS130	MANAGEMENT OF TECHNOLOGY	4.5	-	3.0	IS120		SOIT
		IT145	PROFESSIONAL ETHICS FOR IT PRACTITIONERS	4.5	-	3.0	IT155, IS125, , IT155L		SOIT
		IT199R	PRACTICUM 1	-	24.0	3.0	IT155, IT155L		SOIT
		IT200-1	CAPSTONE PROJECT 2	1.5	-	1.0	IT200		SOIT
			FREE ELECTIVE 2			3.0			
			PROFESSIONAL ELECTIVE 2			3.0	Professional Elective 1		
			Total	10.5	24.0	16.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
3	4	IS122	TECHNICAL DOCUMENTATIONS	3.0	-	2.0	IS120		SOIT
		IT199-1R	PRACTICUM 2	-	24.0	3.0	IT199R		SOIT
		IT200-2	CAPSTONE PROJECT 3	1.5	-	1.0	IT200-1		SOIT
			FREE ELECTIVE 3			3.0	3rd Year Standing		
			PROFESSIONAL ELECTIVE 3			3.0	Professional Elective 2		
			Total	4.5	24.0	12.0			

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
4	1	IT136F	IT SEMINARS	-	4.5	1.0	For Graduating Students Only		SOIT
		IT199-2R	PRACTICUM 3	-	24.0	3.0	IT199-1R		SOIT
			PROFESSIONAL ELECTIVE 4			3.0	Professional Elective 3		
			Total	0.0	28.5	7.0			

PROFESSIONAL ELECTIVES : 12.00 units

Yr	Qtr	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co-requisites	Caretaker
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BUSINESS ANALYTICS TRACK

3	2	IS196	BUSINESS ANALYTICS 1	4.5	-	3.0	IT131, , IT131L		SOIT
3	3	IS197	BUSINESS ANALYTICS 2	4.5	-	3.0	IS196		SOIT
3	4	IS198	BUSINESS ANALYTICS 3	4.5	-	3.0	IS197		SOIT
4	1	IS199	BUSINESS ANALYTICS 4	4.5	-	3.0	IS198		SOIT
Total				18.0	0.0	12.0			

DATA MANAGEMENT TRACK

3	2	IS186	DATA MANAGEMENT 1	4.5	-	3.0	IT131, , IT131L		SOIT
3	3	IS187	DATA MANAGEMENT 2	4.5	-	3.0	IS186		SOIT
3	4	IS188	DATA MANAGEMENT 3	4.5	-	3.0	IS187		SOIT
4	1	IS189	DATA MANAGEMENT 4	4.5	-	3.0	IS188		SOIT
Total				18.0	0.0	12.0			

IT AUDIT ANC CONTROL TRACK

3	2	IS191	IT AUDIT AND CONTROL 1	4.5	-	3.0	IT131, , IT131L		SOIT
3	3	IS192	IT AUDIT AND CONTROL 2	4.5	-	3.0	IS191		SOIT
3	4	IS193	IT AUDIT AND CONTROL 3	4.5	-	3.0	IS192		SOIT
4	1	IS194	IT AUDIT AND CONTROL 4	4.5	-	3.0	IS193		SOIT
Total				18.0	0.0	12.0			

IT SERVICE MANAGEMENT TRACK

3	2	IS181	IT SERVICE MANAGEMENT 1	4.5	-	3.0	IT131, , IT131L		SOIT
3	3	IS182	IT SERVICE MANAGEMENT 2	4.5	-	3.0	IS181		SOIT
3	4	IS183	IT SERVICE MANAGEMENT 3	4.5	-	3.0	IS182		SOIT
4	1	IS184	IT SERVICE MANAGEMENT 4	4.5	-	3.0	IS183		SOIT
Total				18.0	0.0	12.0			

FREE ELECTIVES : 9.00 units

	Code	Title	Lec Hrs	Lab Hrs	Credit Units	Prereq.s	Co- requisites	Caretaker
	CS150	KNOWLEDGE MANAGEMENT	4.5	-	3.0			SOIT
	CS151	EMBEDDED SYSTEMS	4.5	-	3.0			SOIT
	CS154	INFORMATION SECURITY	4.5	-	3.0			SOIT
	CS156	INTRODUCTION TO CLOUD COMPUTING	4.5	-	3.0			SOIT
	IS185	ESSENTIAL OF SAS	4.5	-	3.0			SOIT
	IT170	IT INFRASTRUCTURE LIBRARY FOUNDATION COURSE	4.5	-	3.0			SOIT
	IT171	FUNDAMENTALS OF SAP	4.5	-	3.0			SOIT
	IT172	MOBILE APPLICATION DEVELOPMENT	4.5	-	3.0	CS133		SOIT

Total Academic Units : 177.00

SCHOOL OF INFORMATION TECHNOLOGY

CS10-1L. COMPUTER FUNDAMENTALS AND PROGRAMMING LABORATORY

This is a laboratory course which aims to introduce the students to the fundamental concepts of computers (hardware and software), information systems, network technologies and electronic data processing. It will focus on the fundamental applications and use of different tools available in program development such as flowchart and pseudocode. Emphasis is given in the formulation of algorithmic solutions to scientific and mathematical problems and the use of appropriate programming language to solve these problems.

Credit : 2 units
Prerequisite : MATH10-3

CS10-2L - INTRODUCTION TO PROGRAMMING LABORATORY

This is a laboratory course focusing on the fundamental applications and use of different tools available in program development such as flowchart and pseudocode. Emphasis is given in the formulation of algorithmic solutions to scientific and mathematical problems and the use of appropriate programming language to solve these problems.

Credit : 1 unit
Prerequisite : MATH10-3
Corequisite : COE112

CS11. INTRODUCTION TO COMPUTER SCIENCE

This course provides the opportunity for students to learn about the computer science program and resources available. Topics include the use of computers, as well as issues and opportunities in computer science.

Credit : 1 unit

CS12. COMPUTER FUNDAMENTALS

This course explores computer hardware, software, data communications and internet technology. Students solve problems through hands-on experience with applications such as word processing (currently Microsoft Word), spreadsheets (currently Microsoft Excel), presentation graphics (currently Microsoft PowerPoint) and web page design (currently Microsoft FrontPage). It also includes introduction of fundamental computer programming concepts that covers topics in problem solving and algorithm development, programming standards, variables, data types, operators, decisions, repetitive structures.

Credit : 2 units

CS12L. COMPUTER FUNDAMENTALS LABORATORY

A laboratory course to accompany CS12.

Credit : 1 unit
Corequisite : CS12

CS13 - COMPUTER FUNDAMENTALS

This course explores computer hardware, software, data communication and Internet Technology. It also includes introduction of fundamental computer programming concepts that covers topics on problem solving and algorithm development, programming standards, variables, data types, operators, decisions, repetitive structures.

Credit : 2 units
Prerequisite : MATH10-2 for TCB

CS13L. COMPUTER FUNDAMENTALS LABORATORY

A laboratory course to accompany CS13.

Credit : 1 unit
Prerequisite : MATH10-2 for TCB
Corequisite : CS13

CS14. PRESENTATION SKILLS AND RESEARCH

This course explores the discussion of different computer application for presentation design such as PowerPoint, etc., with the use of internet as its technological tool for research. It also includes introduction to the internet and World Wide Web, information literacy in technology, and online information resources. This course also enable students to use for presentation design and solving and simulating related problems using different basic applications, which include design and management tools (MS Visio and MS Project) and web page design (MS FrontPage).

Credit : 2 units
Prerequisite(s) : CS13

CS14L. PRESENTATION SKILLS AND RESEARCH LABORATORY

A laboratory course to accompany CS14.

Credit : 1 unit
Corequisite : CS14
Prerequisite(s) : CS13, CS13L

CS30P. Websites and On-line Communication

This course explores the development of technologies involved in Web and online environments such as social networking, online journals, discussion boards and fora. It also explains the major role of Web and online environments in the promotion of collaboration in the way students learn and work. Using a variety of collaboration tools and technologies, students analyze and evaluate recent materials regarding the Web and online environments.

Credit: 3 units
Prerequisite: none

CS31P. Web Design and Development

This course will introduce students to modern and industry standard software for designing and creating working

Websites. Proper interface design, techniques, and efficient content presentation will be the focus of this course.

Credit : 3units

Prerequisite : CS30P

CS32P. Personal Homepage for Web Development

This course is an introductory course in PHP scripting language. PHP is considered as the easiest scripting language and yet powerful. The students will learn to create interactive and dynamic Web content.

Credit : 3units

Prerequisite : CS31P

CS33P. Desktop Publishing

This course is an introductory course to Desktop Publishing using popular desktop publishing software tools. This course will give the students the skills to work accurately and efficiently in designing, printing, and publishing documents.

Credit : 3units

Prerequisite : CS32P

CS34P. Technical Documentation

This course will teach students how to write documentation for Information and Communication (ICT) industry. Focus will be on using language, text, and graphics effectively in order to create interest and impact to the documentation.

Credit : 3units

Prerequisite : TC107, TC111P, CS33P

CS121. GRAPHICAL USER INTERFACES

This course explores the design and development of graphical user interfaces in a computer application with focus on a user-center design. Topics include window layout, menuing systems, interface standards, event-driven and object-oriented programming techniques.

Credit : 3 units

Prerequisite : CS129-1, CS129-1L

CS121L. GRAPHICAL USER INTERFACES LABORATORY

This course is a hands-on laboratory accompanying CS121.

Credit : 1 unit

Corequisite : CS121

Prerequisites : CS129-1, CS129-1L

CS102-1L. WEB DESIGN PRINCIPLES

This course introduces the students with the basic principles of web development using HTML and other similar tools. The emphasis is on the knowledge of developing effective web sites.

Credit : 2 units

Prerequisite(s) : MAS109L

CS126. PROGRAMMING 1

This course focuses on the logic formulation in solving problem using flowcharting and pseudocodes. Also, it covers an introduction to programming using structured language. Topics include procedural syntax, program flow

description, variables and data types, programming selection structures, and iterative structures.

Credit : 2 units

CS126L. PROGRAMMING LABORATORY 1

The programming laboratory course to support and reinforce the concepts discussed in CS126.

Credit : 1 unit

Corequisite : CS126

CS126-1. COMPUTER PROGRAMMING 1

This course focuses on the various aspects of computing in today's world. The students will become familiar with topics such as computer software, hardware, and data processing. Emphasis shall be on logic formulation using flowcharts and pseudocodes.

Credit : 2 units

Prerequisite : MATH10-2

CS126-1L. COMPUTER PROGRAMMING LABORATORY 1

The programming laboratory course to support and reinforce the concepts discussed in CS126-1.

Credit : 1 unit

Corequisite : CS126-1

Prerequisite : MATH10-2

CS127. PROGRAMMING 2

This course covers advanced application development techniques and coding principles using structured programming language. Emphasis must be given to implementation of abstract data types, pointers, strings, input/output file streams, records and data files.

Credit : 2 units

Prerequisites : CS126, CS126L

CS127L. PROGRAMMING LABORATORY 2

The programming laboratory course to support and reinforce the concepts discussed in CS127.

Credit : 1 unit

Corequisite : CS127

Prerequisites : CS126, CS126L

CS128. PROGRAMMING 3

This course covers topics on developing application programs using a modern programming language. It emphasizes the use of advanced concepts in modern programming as well as the use of modern programming tools. The course covers the creation of application programs. Topics include basic language concepts, object-oriented fundamentals, and GUI interfaces.

Credit : 2 units

Prerequisites : CS127, CS127L

CS128L. PROGRAMMING LABORATORY 3

The programming laboratory course to support and reinforce the concepts discussed in CS128.

Credit : 1 unit

Corequisite : CS128

Prerequisites : CS127, CS127L

CS128-1. COMPUTER PROGRAMMING 2

This course covers topics on developing application programs using a modern programming language. It emphasizes the use of advanced concepts in modern programming as well as the use of modern programming tools. The course covers the creation of application programs. Topics include basic language concepts, object-oriented fundamentals, and GUI interfaces.

Credit : 3 units

Prerequisites : CS126-1, CS126-1L

CS128-1L. COMPUTER PROGRAMMING LABORATORY 2

The programming laboratory course to support and reinforce the concepts discussed in CS128-1.

Credit : 1 unit

Corequisite : CS128-1

Prerequisites : CS126-1, CS126-1L

CS128-2. PROGRAMMING 3

The course provides students with the fundamental understanding of object-oriented programming using a modern programming language. It introduces the different concepts that are associated with object oriented programming.

Credit : 2 units

Prerequisites : CS127, CS127L

CS128-2L. PROGRAMMING LABORATORY 3

The programming laboratory course to support and reinforce the concepts discussed in CS128-2.

Credit : 1 unit

Corequisite : CS128-2

Prerequisites : CS127, CS127L

CS129. PROGRAMMING 4

This course involves an in-depth study of software design and implementation using modern, object-oriented programming language with support for graphical user interfaces and complex data structures. Topics cover specifications, design patterns, and abstraction techniques including typing, access control, inheritance, and polymorphism. Students will learn the proper engineering use of techniques such as information hiding, classes, objects, inheritance, exception handling, event-based systems, and concurrency.

Credit : 2 units

Prerequisites : CS128, CS128L, CS133

CS129L. PROGRAMMING LABORATORY 4

The programming laboratory course to support and reinforce the concepts discussed in CS129.

Credit : 1 unit

Corequisite : CS129

Prerequisites : CS128, CS128L, CS133

CS129-1. COMPUTER PROGRAMMING 3

This course covers advanced application development techniques and coding principles using objected oriented programming language. Emphasis must be given to the development of software with graphics application.

Credit : 3 units

Prerequisites : CS128-1, CS128-1L

CS129-1L. COMPUTER PROGRAMMING LABORATORY 3

The programming laboratory course to support and reinforce the concepts discussed in CS129-1.

Credit : 1 unit

Corequisite : CS129-1

Prerequisites : CS128-1, CS128-1L

CS130. WEB APPLICATION AND DESIGN

This course introduces the students with the basic principles of web development using HTML and other similar tools. The emphasis is on the knowledge of developing effective web sites.

Credit : 2 units

Prerequisites : CS126, CS126L

CS130L. WEB APPLICATION AND DESIGN LABORATORY

A hands-on session that applies principles learned in CS130.

Credit : 1 unit

Corequisite : CS130

Prerequisites : CS126, CS126L

CS133. DATA STRUCTURES AND FILE ORGANIZATION

This course extends the concepts of primitive data types by teaching the students a classical set of data structures that pervades both the theoretical and practical domains of computer science. Topics include lists, queues, stacks, graphs and trees, data-storage, file system organization, access methods, and their applications such as sorting, searching, graph traversals, and parsing.

Credit : 3 units

Prerequisite : CS127, CS127L

CS136. SOFTWARE QUALITY

It compares and contrasts various software lifecycles highlighting the software development ecosystems they are most suitable for. Activities and artifacts for a typical software development are discussed along with the verification techniques (inspections and reviews). The techniques to validate software (testing) to meet the acceptance criteria are discussed highlighting the validation strategy. The course explores multiple techniques for continuous improvements such as Defect Causal Analysis and Retrospectives, and data driven software process improvements. It concludes with building a bag full of tricks that the participants are ready to apply in their work place.

Credit : 3 units

Prerequisite : IT155

CS137. DISCRETE MATHEMATICS

This course covers topics on logic (including quantifiers, proofs, mathematical induction, sets, relations and functions), and the pigeonhole principle. It also involves thorough discussion algorithms, recursive algorithms and recurrence relations and their use in the analysis of algorithms, graph theory, trees,, network model and computational geometry.

Credit : 3 units
 Prerequisite : MATH10-4 for CS
 Prerequisite : MATH10-2 for IS
 Prerequisite : MATH10-6 for IT

CS141. DESIGN AND ANALYSIS OF ALGORITHMS

The course deals with the practice of computing and the theoretical analysis of computer science problem. It involves both mathematical analysis, space and time complexity of algorithms including numerical, sorting, searching, matrices, graphs, games, puzzles, and data structures. It focuses on understanding the different algorithm design techniques.

Credit : 3 units
 Prerequisites : CS133

CS142. AUTOMATA AND LANGUAGE THEORY

This course covers topics on abstract machine and language, finite automata, regular expressions, push down automata and context-free languages and pumping lemma. Also, it discusses machines and recursively enumerable languages and other properties dealing with grammars and machine languages.

Credit : 3 units
 Prerequisites : IT131, CS137

CS143. HUMAN COMPUTER INTERACTION

This course provides an introduction to and overview of HCI as a discipline that concerned with the design, evaluation and implementation of interactive computing systems for human use. Emphasis will be placed on principles of interface design and the basic concepts and methods for usability studies and evaluation of interactive systems as well as apply those methods to actual system/software design evaluations. The course will also explore the current issues in the major areas of HCI, and emerging paradigms for user interaction.

Credit : 3 units
 Prerequisites : CS130, CS130L

CS144. MODELING AND SIMULATION THEORY

This course discusses the fundamentals of modeling and simulation particularly on discrete event systems. The application concepts, theories, methods and practices are also discussed.

Credit : 3 units
 Prerequisite : CS137

CS145. STRUCTURE OF PROGRAMMING LANGUAGES

This course is a survey of fundamental concepts underlying modern programming languages. The emphasis is on identifying common syntactic and semantic programming language constructs, examining their manifestation in specific programming languages, and understanding the similarities and differences that arise in language implementations. The programming language paradigms that will be studied are imperative, object-oriented, concurrent, and functional.

Credit : 2units
 Prerequisites : CS129, CS129L

CS145L. STRUCTURE OF PROGRAMMING LANGUAGES LABORATORY

A comparative study of issues involved in the design, implementation, and use of programming languages. The study of syntax includes methods for specifying languages using formal grammars and an introduction to parsing techniques. The study of semantics includes the definition of an abstract model of computation and its application to a specific programming language. Features that are treated in-depth include primitive types, abstract data types, control structures, and storage management. Procedural and functional languages are used throughout to illustrate similarities and differences in language design philosophy and implementation.

Credit : 1unit
 Corequisite : CS145
 Prerequisites : CS129, CS129L

CS146. NUMERICAL METHODS

This course covers the detailed concepts of numerical analysis in solving problems using a computer. It includes numerous techniques and finding roots of an equation, solving system of linear and non-linear equations, matrix, eigenvalue problems, polynomial approximation and interpolation.

Credit : 3 units
 Prerequisite : MATH22-1

CS148. GAME PROGRAMMING

This course introduces the student to fundamental knowledge of game programming using any programming language available to students to create games that will run in any current web browser. This course aims to utilize the student's modeling, scripting, and design skills to create playable web-based games. The major requirement of the course is a web-based game program running in any available web browser.

Credit : 3 units
 Pre-requisite : CS121

CS148L. GAME PROGRAMMING LABORATORY

This course is a hands-on laboratory accompanying CS148.

Credit : 1 unit
 Corequisite : CS148
 Prerequisites : CS121, CS121L

CS150. KNOWLEDGE MANAGEMENT

This course teaches the essential principles of knowledge management. Shows how KM and CRM technologies work, and how they impact the IT infrastructure. Also shows how to use team-building and goal-setting exercises to create excellent KM/CRM projects, and how to align e-business strategy and technology choices.

Credit : 3 units
Prerequisite : 3RD Year Standing

CS151. EMBEDDED SYSTEMS

This course provides an overview of embedded systems, with the emphasis on communication among distributed systems, interfacing with external environments, energy conservation, safety and reliability. The course covers design principles, methodologies, design tools, and case studies. The lectures are divided into two parts. The first provides the basic principles for building embedded systems and techniques for solving common problems. The second part includes case studies of various embedded systems.

Credit : 3 units
Prerequisite : 3RD Year Standing

CS153P. INTRODUCTION TO GAME PROGRAMMING

This course introduces the student to fundamental knowledge of game programming using any programming language available to students to create game. This course aims to utilize the student's modeling, scripting, and design skills to create playable games.

Credit : 3 units
Prerequisite : 3RD Year Standing

CS154. INFORMATION SECURITY

This course provides an overview of the latest techniques and examines issues surrounding Information Security. This course details the requirements for a formal management system and outlines information security issues including methods of control and countermeasures for threats.

Credit : 3 units
Prerequisite : 3rd Year Standing

CS155P. 3D ANIMATION AND MODELLING

This course is intended to present students a fundamentals to the world of computer generated 3-D modeling and animation. It provides a basic understanding of the skills and techniques employed by 3-D designers in a wide range of applications.

Credit : 3 units
Prerequisite : 3RD Year Standing

CS156. INTRODUCTION TO CLOUD COMPUTING

The course introduces an internet-based computing known as cloud computing. The course includes the discussion of the historical evolution and foundation of cloud computing, it's advantages and disadvantages, applications, architecture and requirements, management, land security issues. The course would also expose the students to a

computing environment that would enable them to develop cloud applications.

Credit : 3 units
Prerequisite : 3rd Year Standing

CS157. DATA MINING

This course provides fundamental concepts of data mining. Students will become acquainted with both the strengths and limitations of various data mining techniques like classification, association analysis and cluster analysis.

Credit : 3 units
Prerequisite : 3rd Year Standing, CS141, MATH30-10

CS158. ARTIFICIAL INTELLIGENCE

This course is an introduction to basic principles, techniques, and applications of artificial intelligence. It will also focus on the basic concepts and techniques underlying the design of intelligent computer systems.

Credit : 3 units
Prerequisite : 3rd Year Standing, CS128, CS133

CS159. PATTERN RECOGNITION

Pattern recognition course focuses on the description and classification of image and video data based on a priori knowledge or on statistical information extracted from the data. The course provides a survey of a variety of statistical paradigms and popular pattern recognition algorithms.

Credit : 3 units
Prerequisite : 3rd Year Standing, CS128, CS141, MAHT30-10

CS181P. JAVA PROGRAMMING 1

This course provides students with information about the syntax of the Java programming language; object-oriented programming with the Java programming language; creating graphical user interfaces (GUIs), exceptions, file input/output (I/O), and threads; and networking. Programmers familiar with object-oriented concepts can learn how to develop Java technology applications. The course features the Java Platform, Standard Edition platform, and utilizes the Java SE Development Kit product.

Credit : 3 units
Prerequisite : 3rd Year Standing, IT131, IT131L

CS182P. JAVA PROGRAMMING 2

This course provides students with practical experience in designing a vertical solution for a distributed, multi-tier application. Students use graphical user interface (GUI) design principles and network communications capabilities to code a functional Java application that interacts with a networked database server. The blended approach of designing and developing programs for applications has been clearly emphasized in this course. New features that blend with the special IDE GUI building capabilities, such as Matisse, are covered. The course features the Java Platform, Standard Edition technology and utilizes the Java SE Development Kit product.

Credit : 3 units

Prerequisite : CS181P

CS183P. JAVA PROGRAMMING 3

This course provides students with the knowledge to build and deploy enterprise applications that comply with Java Platform, Enterprise Edition technology standards. The enterprise components presented in this course include Enterprise JavaBeans (EJB) technology, the Java Persistence API, servlets, and JavaServer Pages (JSP) technology, JavaServer Faces (JSF), RESTful and SOAP web services, and the Java technology clients that use them. Students gain hands-on experience through labs that build an end-to-end, distributed business application.

Credit : 3 units

Prerequisite : CS182P

CS184P. JAVA PROGRAMMING 4

The Developing Mobile Phone Applications with J2ME Technology course provides students with hands-on experience with developing mobile applications on the Java 2 Platform, Micro Edition (J2ME platform) using Connected, Limited Device Configuration (CLDC) and the Mobile Interface Device Profile (MIDP). The course provides information about MIDP specifications, concepts, and capabilities.

Credit : 3 units

Prerequisite : CS183P

CS195P. COBOL PROGRAMMING 1

The course is an introduction to COBOL Programming. This covers the concepts, components, and functions of the COBOL programming language. The course will provide students with a working knowledge on how to create simple programs in this programming environment.

Credit : 3 units

Prerequisite : 3rd Year Standing, IT131, IT131L

CS196P. COBOL PROGRAMMING 2

The course covers advance topics on COBOL Programming. This covers the concepts, components, and functions of the COBOL programming language using relative, indexed and DB2 files. The course will provide students with a working knowledge on how to create programs using different file types in this programming environment.

Credit : 3 units

Prerequisite : CS195P

CS197P. COBOL PROGRAMMING 3

The course covers actual application of all the concepts learned in COBOL 1 and 2 with emphasis on JCL, Production Support and Complex Programming in COBOL.

Credit : 3 units

Prerequisite : CS196P

CS198P. COBOL PROGRAMMING 4

The course covers actual application of all the concepts learned in COBOL 1 and 2 with emphasis on Component Testing and Systems Integration Assembly Testing.

Credit : 3 units

Prerequisite : CS197P

CS199R. CS PRACTICUM

A course that serves as introduction to application environment and enable students to relate their acquired competencies to the realities and problems of the CS practice. This is an internship that may include but not limited to involvement in the industries' manpower requirements, research and development, and trainings. Students at the end of their program of study are required render 240 hours and prepare a post-internship report.

Credit : 3 units

Prerequisite : Graduating

CS200. THESIS 1

This course covers basic research issues and both quantitative and qualitative approaches to research. Topics include research process, methodological tools for understanding and conducting basic research projects, data collections and analytical procedures. This also serves as the course for the approval of thesis project.

Credit : 2 units

Corequisite : RES100-3

CS200-1. THESIS 2

This course is a non-classroom learning, environment in which students may apply skills and methods and learn theories in developing the approved thesis topic.

Credit : 2 units

Prerequisite : CS200

CS200-2. THESIS 3

This course covers the implementation, system testing, and analysis of test results and documentation of the approved thesis topic.

Credit : 2 units

Prerequisite : CS200-1

CS213. ADVANCED DATA STRUCTURES AND ALGORITHMS

This course covers the design, analysis and proofs of correctness of algorithms. It also discusses algorithms for advanced data structures, set manipulation and searching, graphs and geometric problems. In terms of analysis techniques, it includes asymptotic worst case and average case, as well as amortized analysis. The development of a probability model is discovered for average case analysis. NP-completeness will also be discussed.

Credit : 3 units (with laboratory component)

CS214. ADVANCED COMPUTER ORGANIZATION AND OPERATING SYSTEMS

This course covers the advanced topics in the theory, design and implementation of operating systems. It will also cover selected areas such as performance of operating systems, distributed operating systems, operating systems for multiprocessor systems and operating systems research.

Credit : 3 units (with laboratory component)

CS215. THEORY OF COMPUTATIONS

This course covers formal languages which include topics on regular languages, regular expressions, finite state machines, context-free languages, grammars, and pushdown machines. It also covers computability with topics on primitive recursive functions, partial recursive functions, recursive languages, recursive enumerable languages, and Turing machines. Computational complexity: space and time complexity, complexity classes (such as P, NP, PSPACE, L, and NL), and complete problems.

Credit : 3 units

CS221. THEORY OF PROGRAMMING LANGUAGES

This course covers a survey of programming language paradigms with focus on issues in the design, implementation, and applications of programming languages. Syntactic and semantic specifications will also be covered.

Credit : 3 units (with laboratory component)

CS222. ADVANCE ALGORITHMS ANALYSIS

This course introduces advanced mathematical techniques for analyzing the complexity and correctness of algorithms, with emphasis on probability theory, randomized algorithms, and approximation algorithms.

Credit : 3 units

CS225. COMPLEXITY THEORY

This course will define what it means for a problem to be hard (or easy) in a variety of ways. The emphasis will be on natural problems. Topics may include NP-completeness, Sparse Sets, Graph Isomorphism (why it is thought to not be NP-complete), Counting problems, and approximation problems

Credit : 3 units

CS226. COMPUTER MODELING AND SIMULATION

This course focuses on computer-based simulation, where the model is implemented as part of a computer program, which can then be executed to compute and record the data which describes the simulated system's behavior.

Credit : 3 units (with laboratory component)

CS242. ADVANCED DISTRIBUTED SYSTEMS

This course introduces the design and control of distributed computing systems (operating systems and database systems), principles and naming locations, atomicity, resource sharing, concurrency control and other synchronization, deadlock detection and avoidance, security, distributed data access and control, integration of operating systems and computer networks, distributed systems design, consistency control, and fault tolerance.

Credit : 3 units (with laboratory component)

CS254. ADVANCED SOFTWARE ENGINEERING

This course is a graduate-level software engineering course that explores advanced specification and design in UML, component-based software engineering, rapid/agile

development processes and techniques, advanced validation and verification methods, configuration management, and other advanced topics.

Credit : 3 units (with laboratory component)

CS255. SPECIAL TOPICS IN SOFTWARE ENGINEERING

This course focuses on special topics in practical development tools, software architecture, and advance web topics.

Pre-requisite : CS254

Credit : 3 units (with laboratory component)

CS256. ADVANCED DATABASE SYSTEMS

This is a course that introduces master level students awareness of the basic issues in object-oriented data models, Web-DBMS integration technology and XML for internet database applications, data-warehousing and data mining techniques, and other advanced topics, apply the knowledge acquired to solve simple problems.

Credit : 3 units (with laboratory component)

CS258. SOFTWARE TESTING AND QUALITY ASSURANCE

This course introduces topics on the different methods of testing, verification and validation, quality assurance processes and techniques, and ISO 9000/SEI CMM process evaluation.

Credit : 3 units (with laboratory component)

CS260. ADVANCE TOPICS IN COMPUTER SCIENCE

This is a course that discusses latest topics and/or milestones in computer science.

Credit : 3 units (with laboratory component)

CS261. ARTIFICIAL INTELLIGENCE

This course introduces the basic principles, techniques, and applications of artificial intelligence. The focus of the course is on the design and implementation of *intelligent agents* - systems that perceive and act on an environment through reasoning, solving problems, and drawing inferences. Topics include searching, knowledge representation, and learning.

Credit : 3 units (with laboratory component)

CS262. MACHINE LEARNING

This course provides a broad introduction to machine learning and statistical pattern recognition. Topics include: supervised learning (generative/discriminative learning, parametric/non-parametric learning, neural networks, and support vector machines); unsupervised learning (clustering, dimensionality reduction, kernel methods); learning theory (bias/variance tradeoffs; VC theory; large margins); reinforcement learning and adaptive control.

Credit : 3 units (with laboratory component)

CS263. PATTERN RECOGNITION

This course is designed to equip graduate students with basic mathematical and statistical techniques commonly used in pattern recognition, introduces a variety of pattern

recognition algorithms, and provides a detailed overview of some advanced topics in pattern recognition.

Credit : 3 units (with laboratory component)

CS264. NEURAL NETWORK

This course focuses on the foundations of neural network theory and the application of neural network models in engineering, cognitive science, and artificial intelligence. The course will present the major neural network paradigms: attractor neural network models of memory, a sequence of supervised learning models of increasing complexity, a sequence of unsupervised clustering and categorization networks, reinforcement learning networks, and aspects of learning theory.

Credit : 3 units (with laboratory component)

RES290-3. RESEARCH TECHNIQUES WITH STATISTICAL METHODS

This course discusses research design, analysis and interpretation of data, basic research methods, and qualitative and quantitative research techniques.

Pre-requisite : 2nd Year Equivalent

Credit : 3 units

CS299. MASTER'S THESIS 1

Pre-requisite: All Core Subjects

Credit: 3 units

CS299-1. MASTER'S THESIS 2

Pre-requisite: CS299

Credit: 3 units

IS100. FUNDAMENTALS OF INFORMATION SYSTEMS

This course is designed to introduce students to concepts of information systems and its role in today's business environment. Emphasis will be given to key components of information systems and technology and how the components and concepts are utilized and managed to produce competitive advantage. This course will also provide introduction to information system development and implementation.

Credit : 3 units

Prerequisite : none

IS110. PRINCIPLES OF BUSINESS AND MANAGEMENT

This course introduces the principles of business and management within a modern organizational environment. It will focus on the major theories of management and will critically examine the various management functions and principles.

Credit : 3 units

Prerequisite : IS100

IS115. IT AND BUSINESS PROCESS MANAGEMENT

This course gives students an introduction to key concepts, terms, methodologies, techniques, and technologies of business process management and improvement. The main focus of this course is on understanding, designing and

planning processes for business towards developing the students' ability to identify, document, model, assess, and improve core business processes with the use of computing technologies. Students will be exposed to challenges and approaches to organizational change, domestic and offshore outsourcing, and inter-organizational processes.

Credit : 3 units

Prerequisite : IS110

IS120. INFORMATION SYSTEMS PLANNING

This course explores how IS function integrates/supports/enables various types of organizational capabilities. The focus of the course is in the development of planning skills involving analysis, design, acquisition, development and implementation of plans and policies for effective business and organization information systems. Emphasis shall be given to IS planning process and plan documentation.

Credit : 3 units

Prerequisite : IS115, IT132, IT132L

IS122. TECHNICAL DOCUMENTATIONS

The course is about the development and packaging of IS plans and IT products. It focuses on the types and format of documents that describes IS plans and IT products to its users. At the end of the course the student should be able to write a simple document such as technical manual, user's guide, operating procedure, systems manual, online information and other documents relating to evaluating, planning for, setting up or installing, customizing, administering, using, and maintaining a product, a system and/or IS plan.

Credit : 2 units

Prerequisite : IS120

IS125. INFORMATION SYSTEMS MANAGEMENT

This course discusses the processes, methods, techniques and tools that organizations use to manage their information systems projects/processes. This course explores the issues and approaches in managing the information systems in organizations. The students will have understanding of the various functions and activities within the IS area, including the role of IT management and the chief information officers, structuring of IS management within the organization and managing IS professionals within the firm. The course explores aspects of IS plan implementation, management, monitoring, audit and control.

Credit : 3 units

Prerequisite : IS120

IS130. MANAGEMENT OF TECHNOLOGY

This course is designed to introduce students to new and innovative technologies and examine how these emerging technologies are brought to market and applied to reengineer business processes. The aim of this course is to help students develop a strong conceptual foundation for managing technological innovation. It introduces concepts and frameworks for analyzing how firms can create,

commercialize and capture value from technology-based products and services.

Credit : 3 units

Prerequisite : IS120

IS181. IT SERVICE MANAGEMENT 1

This is a foundation course that provides understanding of the discipline and processes of IT services. It covers IT service management terminology, structure, concepts and core principles. It explores concepts of enterprise systems management, infrastructure management and relationship management. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : 3rd Year Standing, IT131, IT131L

IS182. IT SERVICE MANAGEMENT 2

This course is the continuation of IS181, the overview of IT services and concentrates on infrastructure and relationship management using case studies to support these topics. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS181

IS183. IT SERVICE MANAGEMENT 3

The course covers the best practices in IT service management and explores on the tools/software/platform that support the service management activities. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS182

IS184. IT SERVICE MANAGEMENT 4

This course is the continuation of IS183 and focuses on the IT service management tools' application and environment. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS183

IS185. ESSENTIAL OF SAS

This course is for users who want to learn the essentials of SAS programming and the reporting and analysis capabilities of SAS Enterprise Guide.

Credit : 3 units

Prerequisite : 3rd Year Standing

IS186P. DATA MANAGEMENT 1

This is an advanced course in data management that focuses on the development of database techniques in large enterprises and emphasizes on specific database management system/tools (DBMS) widely used in the industry. It covers the fundamentals of the DBMS tool and introduction to applications on concepts of database and data management systems. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : 3rd Year Standing, IT131, IT131L

IS187P. DATA MANAGEMENT 2

This course covers the development of applications and management of program constructs and descriptions of DBMS Tool supplied packages. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS186P

IS188P. DATA MANAGEMENT 3

This course includes building and testing of interactive applications and working in a graphical interface (GUI) environments. It will also cover creation and customization of forms and reports. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS187P

IS189P. DATA MANAGEMENT 4

The course is about learning the skills and knowledge to install, configure, and maintain the database. The course will also explore the advance data administration and automation as well as emerging technologies related to data management. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS188P

IS191. IT AUDIT AND CONTROL 1

This course introduces the fundamental concepts of the information technology audit and control function. The course covers the objectives of IT audit and control and explores the IT risks to business process and continuity. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : 3rd Year Standing, IT131, IT131L

IS192. IT AUDIT AND CONTROL 2

This course provides understanding of the role and objectives of information technology audits. It will give emphasis on the concepts and techniques used in information technology audits. At the end of the term the student shall be able to have skills in the development of an appropriate information technology audit process. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS191

IS193. IT AUDIT AND CONTROL 3

The course is about the skills and knowledge on the process of creating a control structure according to specific goals and objectives. This course includes computer laboratory exercises and demonstration.

Credit : 3 units

Prerequisite : IS192

IS194. IT AUDIT AND CONTROL 4

The course is about the skills and knowledge in the design and implementation of assurance procedures and control measures. It will explore IT audits best practices, standards and regulatory requirements as well as advance topics such as data forensic and disaster recovery plans. This course includes computer laboratory exercises and demonstration.

Credit : 3 units
Prerequisite : IS193

IS196P. BUSINESS ANALYTICS 1

This course covers essentials of SAS programming. This course includes computer laboratory exercises and demonstration.

Credit : 3 units
Prerequisite : 3rd Year Standing, IT131, IT131L

IS197P. BUSINESS ANALYTICS 2

This course is about learning data manipulation techniques using SAS DATA and procedure steps to access, transform, and summarize SAS data sets. The course builds on the concepts that are presented in the previous course. This course includes computer laboratory exercises and demonstration.

Credit : 3 units
Prerequisite : IS196P

IS198P. BUSINESS ANALYTICS 3

This course teaches you how to process SAS data using Structured Query Language (SQL). It also focuses on the components of the SAS Macro facility and how to automate and customize the production of SAS code. This course includes computer laboratory exercises and demonstration.

Credit : 3 units
Prerequisite : IS197P

IS199P. BUSINESS ANALYTICS 4

This course introduces SAS programmers to SAS Business Intelligence and Analytics using SAS Enterprise Guide. It teaches how to access data, create queries, reports and graphics, and discusses the intricacies of using Enterprise Guide as a primary programming interface. This course includes computer laboratory exercises and demonstration.

Credit : 3 units
Prerequisite : IS198P

IT101. INTRODUCTION TO INFORMATION TECHNOLOGY

This course provides the opportunity for students to learn about the information technology program and resources available. It also provides an introduction to the industry of information technology and an overview of the IT profession

Credit : 1 unit

IT110. IT RESEARCH METHODS

This course introduces to the students the variety of issues, concepts, methods and techniques associated with Information Technology research. The skills developed and

knowledge acquired from this course will prepare students to conduct their own IT research. The course also presents the elements of technical writing as applied to the preparation of proposal and final reports, as well as other project documentations.

Credit : 2 units
Prerequisite : IT132, IT132L

IT131. DATABASE MANAGEMENT SYSTEM

This course provides students with a complete introduction to database concepts and the relational database model. Topics include QBE, design methodology, DBMS functions, normalization, database administration, and other database management approaches, such as client/server databases, object oriented databases. At the completion of this course, students should be able to understand a user's database requirements and translates those requirements into a valid database design.

Credit : 2 units
Prerequisites : CS128, CS128L for CS & IT
Prerequisites : CS128-2, CS128-2L for IS

IT131-1. DATABASE MANAGEMENT SYSTEM

This course provides non-IT students with a complete introduction to database concepts and the relational database model.

Credit : 2 units
Prerequisites : CS12, CS12L, MGT100

IT131L. DATABASE MANAGEMENT SYSTEM LABORATORY

This course accompanies IT131. Students apply the principles learned in the lecture in designing and developing a working database system using 4th generation language as front-end and database application software as back-end.

Credit : 1 unit
Corequisite : IT131
Prerequisites : CS128, CS128L for CS & IT
Prerequisites : CS128-1, CS128-1L for IS

IT131-1L. DATABASE MANAGEMENT SYSTEM LABORATORY

Students apply the principles learned in the lecture in designing and developing a working database system.

Credit : 1 unit
Corequisite : IT131-1
Prerequisites : CS12, CS12L, MGT100

IT132. SYSTEMS ANALYSIS AND DESIGN

This course covers the concepts, tools, and techniques required to analyze and design business information systems. Topics include structured development approaches and the system development life cycle, as well as rapid application development through alternative approaches such as prototyping. Emphasis will be given to the role of information systems in organizations and how they relate to organizational objectives and structure. Students will be introduced to systems analysis and design

modeling tools such as data flow diagrams, data dictionaries, decision tables, decision trees, and structure charts.

Credit : 2 units
Prerequisites : IT131, IT131L,

IT132L. SYSTEMS ANALYSIS AND DESIGN LABORATORY

This course will address the systems engineering approach to system design and the role of the professional in that process. Methods and techniques that are applied to the development of system requirements, allocation of functions to human and machine subsystems, the analysis of human task and work requirements, analysis of staffing requirements, the design control centers to support the human tasks, and methods of system evaluation, verification, and validation will be examined. This course will require students to apply these concepts and methods discussed to the actual design project.

Credit : 1 unit
Corequisite : IT132
Prerequisites : IT131, IT131L

IT132-1. SYSTEM ANALYSIS AND DESIGN

This course is designed to provide Accountancy students with an overview of the systems analysis and design concepts, methodologies, techniques, and tools. The course starts with a discussion of the general system concepts; management's use of information; IT infrastructure and rules as they pertain to accounting; accountant's functions with respect to IT; the management of IT adoption, implementation, and use; management of the security of information; and electronic commerce. It then proceeds to a discussion of the systems development environment, system development life cycle, system analysis and design techniques, system acquisition, development life cycle phases, tasks and practices, control maintenance over system development processes, and accounting system design issues.

Credit : 2 units
Prerequisites : IT131-1, IT131-1L, MGT100

IT132-1L. SYSTEM ANALYSIS AND DESIGN LABORATORY

This is the accompanying laboratory course of IT132 where students are provided hands-on experience of the theories and concepts taken up in the lecture course.

Credit : 1 unit
Corequisite : IT132 -1
Prerequisites : IT131-1, IT131-1L, MGT100

IT133. ADVANCED DATA MANAGEMENT

This course extends previous material presented in the earlier database course. It gives focus on the deployment of advanced database techniques in large enterprises. It aims to provide students with up-to-date conceptual and practical knowledge on recent developments in database technology, specifically data mining and data warehousing.

Credit : 2 units
Prerequisites : IT132, IT132L

IT133L. ADVANCED DATA MANAGEMENT LABORATORY

This course extends previous material presented in the earlier database course. It gives focus on the deployment of advanced database techniques in large enterprises. It aims to provide students with up-to-date conceptual and practical knowledge on recent developments in database technology, specifically data mining and data warehousing.

Credit : 1 unit
Corequisite : IT133
Prerequisites : IT132, 132L

IT134. INFORMATION SYSTEMS AND BUSINESS PROCESSES

This course relates to personnel, procedure, files, equipment, and documents to make up a complete data system that will provide information for effective decision-making using computer as a tool. Topics include database management techniques, local and wide area networks, expert system, and artificial intelligence as applied to business information systems.

Credit : 3 units
Prerequisite : IT131

IT135. E-COMMERCE

This course examines the tools and techniques of electronic commerce on the World Wide Web. Interaction with the user and the enterprise is examined from the perspectives of security, data integrity, and performance, as well as dynamics of innovation and the organizational consequences of moving commerce to the internet.

Credit : 2 units
Prerequisites : IT133, IT133L

IT135L. E-COMMERCE LABORATORY

This is a laboratory course that supplements IT135, students apply the concepts learned in designing and developing an e-commerce website using web development tools and programming languages.

Credit : 1 unit
Corequisite : IT135
Prerequisites : IT133, IT133L

IT136F. IT SEMINARS

This course exposes students to seminars and lectures on current information technology topics to keep students abreast of the recent development in the field of IT.

Credit : 1 unit
Prerequisite : Graduating

IT137. MULTIMEDIA

It is a course that integrates video, audio, and graphics to communicate effectively. It also applies theories of aesthetics and designs to create web sites, interactive CDs, and desktop videos. Students will also learn to effectively manage complex projects, gain experience in web design, nonlinear video editing, and CD production.

Credit : 2 units
Prerequisites : CS130, CS130L

IT137L. MULTIMEDIA LABORATORY

It is a hands-on course that applies the actual implementation of multimedia software tools theories. The students will be able to design and create a web site, interactive CDs, and desktop videos using different software tools.

Credit : 1 unit
Corequisite : IT137
Prerequisites : CS130, CS130L

IT139. IT PROJECT MANAGEMENT

This course provides the students with a set of techniques in managing tasks and an understanding in an organization that contributes to meeting the strategic goals of an organization: on time, within budget, at a specified level of performance. It also focuses on the contemporary concepts and procedures of project management such as formulating KRA's, clarifying role definitions and parameters of responsibilities, managing logistics/resources, steps and procedures, monitoring milestones, and ethical standards. MS Project acts as a tool to aid the process.

Credit : 3 units
Prerequisite : IT155

IT140. NETWORK MANAGEMENT

This course covers the construction of large, distributed, automated software systems that configure, monitor, operate, and control large-scale computer networks and internets. Also, this course investigates existing tools, platforms, and paradigms, and seeks abstractions that can be used to build efficient management software systems.

Credit : 2 units
Prerequisite : IT187L

IT140L. NETWORK MANAGEMENT LABORATORY

A laboratory course to accompany IT140.

Credit : 1 unit
Corequisite : IT140
Prerequisite : IT187L

IT145. PROFESSIONAL ETHICS FOR IT PRACTITIONERS

This is a course dealing with ethics as the basis in formulating a code of conduct in the business world particularly in Information Technology. It also includes discussions on the basic concept and rediscovery of the usefulness of the Filipino system of values and code of ethics for the Filipino IT Professional.

Credit : 3 units
Prerequisite : IT134, IT155

IT150. COMPUTER SYSTEM ORGANIZATION AND ARCHITECTURE

This course includes topics on introduction to computer architecture, computer system organization, memory addressing, input/output relationships, interfacing, interrupt mechanism, and multiprocessing. This also

includes discussion on reduced instruction set computers (RISC) and complex instruction set computers (CISC).

Credit : 2 units
Prerequisites : CS127, CS127L

IT152L. COMPUTER HARDWARE AND TROUBLESHOOTING LABORATORY

A laboratory course that covers the assembly, disassembly, and troubleshooting of the computer system.

Credit : 1 unit
Prerequisite : CS126

IT153L. COMPUTER SYSTEM WITH ASSEMBLY LANGUAGE LABORATORY

A laboratory course on the application of the concepts of assembly language programming using the 80x86 instruction sets with emphasis on assembling, linking, and executing programs.

Credit : 1 unit
Corequisite : IT150
Prerequisites : CS127, CS127L

IT154. PRINCIPLES OF OPERATING SYSTEMS

This course covers the concepts and approaches in the design and construction of a modern computer operating system. It includes the study of the computer system and operating system structures, process management, threads, CPU scheduling, process synchronization, deadlocks, memory management, virtual memory, file system interface and implementation, input/output systems, mass-storage structure, distributed system structures, distributed file systems, protection, and security.

Credit : 2 units
Prerequisites : IT150, IT153L

IT154L. PRINCIPLES OF OPERATING SYSTEMS LABORATORY

A laboratory course on the design and construction of modern computer operating systems.

Credit : 1 unit
Corequisite : IT154
Prerequisites : IT150, IT153L

IT155. SOFTWARE ENGINEERING

A course on software development processes such as project planning, requirement analysis, system and program design, program implementation tools and techniques, coding and programming techniques, program and system testing, software maintenance, and reusable software management issues.

Credit : 2 units
Prerequisite : IT132, IT132L

IT155L. SOFTWARE ENGINEERING LABORATORY

A laboratory course applying the principles of software engineering.

Credit : 1 unit
Corequisite : IT155

Prerequisites : IT132, IT132L

IT160. LOGIC CIRCUITS AND DIGITAL DESIGN

This course covers data representations and computer arithmetic, logic gates and functions, description, analysis and design of combinational and sequential circuits, and functional properties of digital integrated circuits.

Credit : 2 units

Prerequisite : PHY11-1

IT160L. LOGIC CIRCUITS AND DIGITAL DESIGN LABORATORY

This course provides a hands-on laboratory course dealing with arithmetic, logic gates and functions, description, analysis and design of combinational and sequential circuits, and functional properties of digital integrated circuits.

Credit : 1 unit

Prerequisite : PHY11-1

Corequisite : IT160

IT170. IT INFRASTRUCTURE LIBRARY FOUNDATION COURSE

The course introduces the concepts of IT Service Management of the IT Infrastructure Library (ITIL). It describes the IT Service Management Lifecycle and provides a set of specialized organizational capabilities for providing value to customers in the form of services.

Credit : 3 units

Prerequisite : 3rd Year Standing

IT171. FUNDAMENTALS OF SAP

This course deals with the introduction of the functionalities and capabilities of an enterprise resource planning software that will model business processes using SAP datasets.

Credit : 3 units

Prerequisite : 3rd Year Standing

IT172. MOBILE APPLICATION DEVELOPMENT

This course is an introduction to the development of mobile applications. It will explore the principles and challenges in the design, implementation and deployment of applications to various platforms such as IOs, Android and Windows.

Credit : 3 units

Prerequisite : 3rd Year Standing, CS128, CS133, CS128-2(IS)

IT190P. MICROSOFT .NET TECHNOLOGY 1

This course provides a thorough introduction to the .Net Framework using C# as the programming language. It covers the essentials of the C# programming language, introducing built in data types, operators, control structures, classes, and methods. Students then learn how to leverage the power of the .NET Framework classes to build Windows based applications.

Credit : 3 units

Prerequisite : 3rd Year Standing, IT131, IT131L

IT191P. MICROSOFT .NET TECHNOLOGY 2

This course provides the students the knowledge and skill in building web applications with ASP.NET. The use of web forms, HTML controls, web controls, and validation controls are examined via the code-behind programming model. State management via the view state, session state, and application objects will be introduced, as well as effective use of cookies. Other topics include event handling; developing and consuming web services; file I/O; using XML data with DataSets; and deploying ASP.NET applications.

Credit : 3 units

Prerequisite : IT190P

IT192P. MICROSOFT .NET TECHNOLOGY 3

This course introduces the technology in building data-centric applications, distributed application and Web services with Microsoft ADO.NET, Microsoft SQL Server™ 2005, and the Microsoft .NET Framework.

Credit : 3 units

Prerequisite : IT191P

IT193P. MICROSOFT .NET TECHNOLOGY 4

This course provides principle methodologies, constraints, and technologies of Mobile and Network Application using Microsoft Visual Studio.Net

Credit : 3 units

Prerequisite : IT192P

IT199R. PRACTICUM 1

A course on industry exposure to enable students to relate their acquired competencies to the realities and problems of the IT industries. This may include involvement in the industries' manpower requirements, development and research concerns, trainings, application of principles, environmental concerns, ethical behavioral concerns, decisions making, and resources concerns. Initial part of the course involves seminars and workshops on non-technical aspects of internship and pre-internship preparations.

Credit : 3 units

Prerequisite : IT134, IT155

IT199-1R.PRACTICUM 2

This course is the continuation of IT199R. At the end of the course the student should be able to render a minimum of 244 hours of internship.

Credit : 3 units

Prerequisite : IT199R

IT199-2R.PRACTICUM 3

This course is the culmination of the internship program. At the end of the course the student should be able to complete the required of 488 hours of internship. It also involves the documentation and oral presentation of the internship activity.

Credit : 3 units

Prerequisite : IT199-1R

IT200. CAPSTONE PROJECT 1

This course covers basic research project issues and both quantitative and qualitative approaches to research. Topics include research process, methodological tools for understanding and conducting basic research projects, data collection and analytical procedures. This also serves as the course for the approval of research project.

Credit : 1 unit
Corequisite : IT110
Prerequisite : IT155

IT200-1. CAPSTONE PROJECT 2

This course is a non-classroom learning environment in which students may apply skill, methods, and learned theories in developing the approved research project.

Credit : 1 unit
Prerequisite : IT200

IT200-2. CAPSTONE PROJECT 3

This course covers the implementation, system testing and analysis of test results and documentation of the approved research project.

Credit : 1 unit
Prerequisite : IT200-1

RES100-3.METHODS OF RESEARCH

Nature and characteristics of research, the general approach of research studies, and processes and methodologies of research as applied to computer science; elements of technical writing as applied to the preparation of reports, proposals and theses; writing of research proposal.

Credit : 2 units
Prerequisite : CS141, 3rd Year Standing