

Course Details of the Department of *Computer Science/New Program BSc. (Honors)*
Software Engineering

Semester	Generic Code *	Course code *	Course Title	PPW	Credit	CIA	ESE	Passing minimum in		
								ESE	Aggregate	
I		ENG101	English(B.Sc Syllabus)	4	4	30	70	28	40	
		SEL101	Second language B.Sc(Syllabus)	4	4	30	70	28	40	
		HSE101	Programming in C	4	4	30	70	28	40	
		HSE111	Programming in C - Lab	3	1	15	35	14	20	
		HSE102	Computer Organization	4	4	30	70	28	40	
		HSE103	Calculus and Differential Equations	4	4	30	70	28	40	
		HSE104	Statistics and Probability Models	4	4	30	70	28	40	
		HSE114	Statistics and Probability Models- Practical	3	1	15	35	14	20	
		AECC - 1	AECC101	Environmental Science	2	2	15	35	14	20
	II		ENG202	English - B.Sc Syllabus	4	4	30	70	28	40
			SEL202	Second Language- B.Sc Syllabus	4	4	30	70	28	40
			HSE205	Data Structures using C	4	4	30	70	28	40
			HSE215	Data Structure using C Lab	3	1	15	35	14	20
			HSE206	Operating Systems	4	4	30	70	28	40
		HSE207	Algebra	4	4	30	70	28	40	
		HSE208	Statistical Inference	4	4	30	70	28	40	
		HSE218	Statistical Inference- Practical	3	1	15	35	14	20	
		AECC - 2	AECC202	Gender Sensitization	2	2	15	35	14	20
III			ENG303	English - B.Sc Syllabus	4	4	30	70	28	40
			SEL303	Second Language- B.Sc Syllabus	4	4	30	70	28	40
			HSE309	Object Oriented Programming using Java	4	4	30	70	28	40
			HSE319	OOP -Lab	3	1	15	35	14	20
			HSE3010	DBMS	4	4	30	70	28	40
		HSE3011	Discrete Mathematics	4	4	30	70	28	40	
		HSE3012	Statistical Methods	4	4	30	70	28	40	
		HSE3112	Statistical Methods- Practical	3	1	15	35	14	20	

	SEC		Communication/Professional skills	2	2	15	35	14	20
IV		ENG404	English - B.Sc Syllabus	4	4	30	70	28	40
		SEL404	Second Language- B.Sc Syllabus	4	4	30	70	28	40
		HSE4013	Web Designing	4	4	30	70	28	40
		HSE4113	Web Designing Lab	3	1	15	35	14	20
		HSE4014	Software Engineering Concepts	4	4	30	70	28	40
		HSE4015	Real Analysis	4	4	30	70	28	40
		HSE4016	Optimization Techniques with R	4	4	30	70	28	40
		HSE4116	Optimization Techniques with R- Practical	3	1	15	35	14	20
	SEC		Software Project Management	2	2	15	35	14	20
V		HSE5017	Advanced Java	4	4	30	70	28	40
		HSE5117	Advanced Java Lab	3	1	15	35	14	20
		HSE5018	Computer Networks	4	4	30	70	28	40
		HSE5118	Computer Networks Lab	3	1	15	35	14	20
		HSE5019	Linear Algebra	4	4	30	70	28	40
		HSE5020	Design and Analysis of Algorithms	4	4	30	70	28	40
Elective		HSE5021A	PHP and MySQL	4	4	30	70	28	40
		HSE5021B	Dot Net Technologies	4	4	30	70	28	40
	GE		Inter Disciplinary Course(CBCS)	4	4	30	70	28	40
	AECC - 3*		Leadership and management Skills/Human Values	2	2	15	35	14	20
VI		HSE6022	Big Data Analytics	4	4	30	70	28	40
		HSE6122	Big Data Analytics Lab	3	1	15	35	14	20
		HSE6023	Artificial Intelligence	4	4	30	70	28	40
		HSE6123	Artificial Intelligence Lab	3	1	15	35	14	20
		HSE6024	Machine Learning using Python	4	4	30	70	28	40
		HSE6124	Machine Learning using Python Lab	3	1	15	35	14	20
		HSE6025	Object Oriented Software Development	4	4	30	70	28	40
Elective		HSE6026A	Dev Ops	4	4	30	70	28	40
		HSE6126A	Dev Ops Lab	3	1	15	35	14	20
		HSE6026B	Web Application Development	4	4	30	70	28	40
		HSE6126B	Web Application Development Lab	3	1	15	35	14	20
	Project	HSE6127	Project / Core/ Online course	4	4	15	35	14	20

			/(MOOC, NPTEL etc.)						
VII		HSE7028	Cloud Computing	4	4	30	70	28	40
		HSE7029	UI/UX Framework	4	4	30	70	28	40
Elective		HSE7030A	Mobile App Development	4	4	30	70	28	40
		HSE7030B	Software Quality and Testing	4	4	30	70	28	40
Skill Lab		HSE7131	Selenium : Automated Testing for Web Applications	3	1	15	35	14	20
Project		HSE7132	Honors Project Work - Phase-1		5				
VIII									
Project		HSE7133	Honors Project Work/ - Phase-2		15				