

<b>Year 2: Semester 1:</b>		
<b>Cores:- (4 Core Courses)</b>		
BIS 2100	Information Systems Security	4
BIT 2100	Information Systems Development	4
BIT 2101	Information Systems Management	3
BIT 2102	Electronic Commerce	4
Electives	:- (1 Elective Course)	
BIS 2102	Knowledge-based Systems	3
BIT 2105	Electronic Media Systems and Media	3
<b>Year 2: Semester 2:</b>		
<b>Cores:- (4 Core Courses)</b>		
BIS 2200	Intelligent Systems	4
CSC 2202	Systems Analysis and Design	4
CSC2203	Database Languages	4
CSC 2204	Research Design and Implementation	
Electives :-	(1 Elective Course)	
BIS 2201	Executive Information Systems	4
BIS 2202	Selected Topics in Information Systems	4
CSC 2200	Operating Systems	4
Year 2: Recess Term:		
BIS 2301	Industrial Training	4

CSC 2302	CCNA Semester III and IV (Audited Course)	
<b>Year 3: Semester 1:</b>		
<b>Cores:- (4 Core Courses)</b>		
BIS 3100	Modeling and Simulation	4
BIS 3101	Requirements Engineering for Organizational Systems	
BIS 3102	Human Computer Interaction	3
CSC 3107	Database Systems	4
Electives :-	(1 Elective Course)	
CSC 3101	Software Engineering	4
CSC 3103	User Interface Design	4
<b>Year 3: Semester 2:</b>		
<b>Cores:- (4 Core Courses)</b>		
BIS 3200	Project in Information Systems	4
BIS 3201	Strategic Management of Information Systems	3
BIS 3203	E-Governance	4
CSC 3209	Computer Networks	4
<b>Electives :- (1 Elective)</b>		
BIT 3204	Enterprise Network Management	4
BIT 3205	Database (DB Programming)	4

## BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING

This programme offers a course of study leading to the B.Sc. in Software Engineering. The objectives of the B.Sc. in Software Engineering programme are: -

- i. To produce graduates who are well-educated in the fundamental concepts of software engineering and able to continue their professional development throughout their careers. The course combines theory with consideration of its application in software engineering practice.
- ii. To build human resource capacity in the Software engineering discipline in both the public and private sectors to students who wish to become proficient in developing software in a variety of languages, platforms and applications using a methodical approach.
- iii. To produce graduates with good communication skills capable of

functioning responsibly in diverse environments and able to work in teams.

- iv. To produce graduates who are innovative and are capable of creating jobs;

Codes	Course Description	CU
<b>Year 1: Semester 1:</b>		
<b>Cores:- (6 Core Courses)</b>		
CSK 1101	Communication Skills	3
CSC 1100	Computer Literacy	4
BIT 1102	Communication Technology and Internet	4
BSE 1103	System Analysis And Design	3
BSE 1104	Discrete Mathematics	3
BSE 1105	Business Law	3

<b>Year 1: Semester 2:</b>		
Cores:-(6 Core Courses)		
BSE 1200	Software Development Principles I	4
CSC 1202	Principles Of Programming I	4
BSE 1201	Numerical Analysis	3
CSC 1203	Information Systems	3
BSE 1205	Introduction to Internet Programming	4
CSC 1204	Research Methodology	3
Elective S:- (No Elective Course)		
<b>Year 1: Recess Term:</b>		
BSE 1301	Professional Software Engineering Mini Practical Project I	4
Year 2: Semester 1:		
Cores:- (6 Core Courses)		
BSE 2101	Introduction to Database Systems	4
BSE 2102	Software Development Principles II	4
BSE 2103	Principles of Programming II	4
CSC 2100	Algorithms and Data Structures	4
BSE 2104	Computer Architecture	3
BSE 2105	Formal Methods	3
<b>Year 2: Semester 2: Cores:- (5 Core Courses)</b>		
CSC 2200	System Software	4
BSE 2201	Network Application Development	4
BSE 2202	Embedded Systems Software	4
BSE 2203	Computer Networks and Data communication	4
BSE 2204	Modeling in Information Systems	4
<b>Electives:- (No Elective Course)</b>		
<b>Year 2: recess Term:</b>		
BSE 2301	Professional Software Engineering Mini Practical Project II	4
<b>Year 3: Semester 1: Cores:-(5 Core Courses)</b>		
BSE 3101	IT Projects Management and Development	3

BSE 3102	Object-Oriented Software Engineering	4
BSE 3103	Requirements Engineering	4
CSC 3100	Database Management Systems	4
BSE 3104	Software Metrics	3
<b>Electives:- (At Least 1 Elective Course)</b>		
BSE 3105	Software Evolution	4
BSE 3106	Mobile Networks and Computing	4
BSE 3107	Real-Time and Embedded Systems	4
<b>Year 3:semester 2: Cores:-(4 Core Courses)</b>		
BSE 3201	Software Architecture	4
BSE 3202	Distributed Systems Development	4
BSE 3203	Object-Oriented Programming	4
BSE 3204	Human-Computer Interface Design	4
<b>Electives:- (At Least 1 Elective Course)</b>		
BSE 3205	Unix Shell Programming	4
CSC 3202	Concepts of CAD/CAM	4
BSE 3206	Computer Graphics	4
<b>Year 3: Recess Term:</b>		
BSE 3301	Internship that should leading to Final Year Project	4

**Year 4:Semester 1:  
Cores:-(All Core Courses)**

BSE 4301	Software Engineering Project	6
BSE 4101	Software Reliability and Testing	4
BSE 4102	Ethics for Professional Engineers	3
BSE 4103	Entrepreneurship and Business	3

**Year 4:semester 2:  
Cores:-(All Core Courses)**

BSE 4301	Software Engineering Project	12
BSE 4203	Information Technology and Society	3