Program Code & Name:**P22A-NN3::B.Sc. (Computer Science)**

System: **Semester** Year of Admission: **2017** Duration in Years: **3**

Term 1								1102-1-2017
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**Credit**	**Type**	**Nature**
1	CAP106	OPERATING SYSTEM LABORATORY	0	0	3	2.0	CR	DSC
2	CAP108	INTRODUCTION TO COMPUTER SOFTWARE AND HARDWARE	0	0	1	1.0	CR	DSC
3	CAP118	COMPUTER PROGRAMMING-I	3	0	0	3.0	CR	DSC
4	CAP119	COMPUTER PROGRAMMING-I-LABORATORY	0	0	3	2.0	CR	DSC
5	CAP123	DIGITAL ELECTRONICS	4	0	0	4.0	CR	DSC
6	CAP128	FUNDAMENTALS OF COMPUTER HARDWARE AND SOFTWARE	3	0	0	3.0	CR	DSC
7	MTH106	MATHEMATICAL FOUNDATION-I	3	2	0	5.0	CR	BSC
8	PEL101	COMMUNICATION SKILLS-I	2	1	0	3.0	LC	LCS
TOTAL			15.0	3.0	7.0	23.0		

Term 2								1102-2-2017
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**Credit**	**Type**	**Nature**
1	CAP126	COMPUTER PROGRAMMING-II	3	0	0	3.0	CR	DSC
2	CAP127	COMPUTER PROGRAMMING-II-LABORATORY	0	0	3	2.0	CR	DSC
3	CAP208	COMPUTER ORGANIZATION AND DESIGN	4	0	0	4.0	CR	DSC
4	CAP256	COMPUTER NETWORKS	3	0	0	3.0	CR	DSC
5	CAP257	COMPUTER NETWORKS-LABORATORY	0	0	2	1.0	CR	DSC
6	MTH116	MATHEMATICAL FOUNDATION-II	3	2	0	5.0	CR	BSC
7	PEL102	COMMUNICATION SKILLS-II	1	2	0	3.0	LC	LCS
TOTAL			14.0	4.0	5.0	21.0		

Term 3								1102-3-2017
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**Credit**	**Type**	**Nature**
1		OPEN MINOR/OPEN ELECTIVE 1	3	0	0	3.0	OM	OEM
2	CAP200	DATABASE MANAGEMENT SYSTEMS	3	0	0	3.0	CR	DSC
3	CAP202	OBJECT ORIENTED PROGRAMMING	3	0	0	3.0	CR	DSC
4	CAP280	DATABASE MANAGEMENT SYSTEMS-LABORATORY	0	0	3	2.0	CR	DSC
5	CAP281	OBJECT ORIENTED PROGRAMMING-LABORATORY	0	0	3	2.0	CR	DSC
6	CAP316	COMPUTING PROFESSIONAL PRACTICES AND ETHICS	2	0	0	2.0	CR	DSC
7	CHE110	ENVIRONMENTAL STUDIES	2	2	0	4.0	CR	BSC
8	PES201	SOFT SKILLS	1	2	0	3.0	LC	LCS
9	PEV101	VERBAL ABILITY-I	1	2	0	3.0	LC	LCS
TOTAL			15.0	6.0	6.0	25.0		

Term 4								1102-4-2017
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**Credit**	**Type**	**Nature**
1		DEPARTMENT ELECTIVE 1	0	0	6	3.0	DE	PEP
2		OPEN MINOR/OPEN ELECTIVE 2	3	0	0	3.0	OM	OEM
3	CAP214	FUNDAMENTALS OF WEB PROGRAMMING	3	0	0	3.0	CR	DSC
4	CAP267	DATA STRUCTURES	3	0	0	3.0	CR	DSC
5	CAP282	DATA STRUCTURES-LABORATORY	0	0	3	2.0	CR	DSC
6	CAP283	FUNDAMENTALS OF WEB PROGRAMMING-LABORATORY	0	0	3	2.0	CR	DSC
7	CAP509	SOFTWARE ENGINEERING	3	0	0	3.0	CR	DSC

8	CAP560	OPERATING SYSTEM	4	0	0	4.0	CR	DSC
TOTAL			16.0	0.0	12.0	23.0		

DEPARTMENT ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit
1	CAP349	PROJECT	0	0	6	3.0
2	PEA204	ANALYTICAL SKILLS	2	1	0	3.0

Term 5								1102-5-2017
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**Credit**	**Type**	**Nature**
1		DEPARTMENT ELECTIVE 2	0	0	4	3.0	DE	DSC
2		DEPARTMENT ELECTIVE 3	3	0	0	3.0	DE	DSC
3		OPEN MINOR/OPEN ELECTIVE 3	3	0	0	3.0	OM	OEM
4		PATHWAY ELECTIVE 1	3	0	0	3.0	PW	PWE
5		PATHWAY ELECTIVE 2	3	0	0	3.0	PW	PWE
6	CAP300	SEMINAR ON SUMMER TRAINING	0	0	6	3.0	CR	TCS
7	CAP346	CAPSTONE PROJECT-I	0	0	4	2.0	CR	PRJ
8	MGN313	MANAGEMENT PRACTICES AND ORGANIZATIONAL BEHAVIOR	3	0	0	3.0	CR	HSS
TOTAL			15.0	0.0	14.0	23.0		

DEPARTMENT ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit
1	CAP903	UNIFIED MODELLING LANGUAGE	0	0	4	3.0
2	CAP374	GAME DESIGN-I	0	0	4	3.0
3	CAP323	MULTIMEDIA SYSTEMS	3	0	0	3.0
4	CAP904	FUNDAMENTALS OF JAVA	0	0	4	3.0

DEPARTMENT ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit
1	CAP185	MICROPROCESSORS AND ITS APPLICATIONS	3	0	0	3.0
2	CAP742	PROGRAMMING IN R	0	0	4	3.0
3	CAP901	PROGRAMMING IN ASP.NET	0	0	4	3.0
4	CAP902	OPEN SOURCE TECHNOLOGIES	0	0	4	3.0

PATHWAY ELECTIVE 1 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Elective Area
1	ERT419	BOOT CAMP	0	0	6	3.0	BOOT CAMP
2	CAP909	PL/SQL PROGRAMMING	0	0	5	3.0	DATABASE
3	ERT415	ENTREPRENEURSHIP AND BUSINESS BASICS	0	0	6	3.0	ENTREPRENEURSHIP
4	ERT411	FAMILY BUSINESS ANALYSIS	0	0	6	3.0	FAMILY BUSINESS
5	CAP653	ARTIFICIAL INTELLIGENCE	3	0	0	3.0	GOVERNMENT JOBS
6	CAP653	ARTIFICIAL INTELLIGENCE	3	0	0	3.0	HIGHER STUDIES
7	CAP588	MOBILE APPLICATION DEVELOPMENT	3	0	0	3.0	MOBILE APP DEVELOPMENT
8	CAP602	WIRELESS AND MOBILE NETWORK	3	0	0	3.0	NETWORKING AND SECURITY
9	CAP922	PC DIAGONSTIC TECHNIQUES	0	0	5	3.0	SYSTEM AND ARCHITECTURE
10	CAP916	FRONT-END WEB UI FRAMEWORKS AND TOOLS	0	0	5	3.0	WEB DESIGN AND DEVELOPMENT

PATHWAY ELECTIVE 2 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Elective Area
1	ERT420	PROTOTYPING AND PRE-INCUBATION-I	0	0	6	3.0	BOOT CAMP
2	CAP910	DATA COMPRESSION	0	0	5	3.0	DATABASE
3	ERT416	CUSTOMER AND MARKET RESEARCH	0	0	6	3.0	ENTREPRENEURSHIP
4	ERT412	FAMILY BUSINESS GROWTH-I	0	0	6	3.0	FAMILY BUSINESS
5	CAP647	SYSTEM MODELLING AND ANALYSIS	3	0	0	3.0	GOVERNMENT JOBS
6	CAP647	SYSTEM MODELLING AND ANALYSIS	3	0	0	3.0	HIGHER STUDIES
7	CAP913	MOBILE APP DEVELOPMENT WITH HTML5	0	0	5	3.0	MOBILE APP DEVELOPMENT
8	CAP613	CRYPTOGRAPHY AND SECURITY RISK MANAGEMENT	3	0	0	3.0	NETWORKING AND SECURITY
9	CAP923	SERVER CONFIGURATION AND MANAGEMENT	0	0	5	3.0	SYSTEM AND ARCHITECTURE
10	CAP917	FRONT-END JAVASCRIPT FRAMEWORKS	0	0	5	3.0	WEB DESIGN AND DEVELOPMENT

Term 6								1102-6-2017
S.No	**Course Code**	**Course Title**	**L**	**T**	**P**	**Credit**	**Type**	**Nature**
1		DEPARTMENT ELECTIVE 4	0	0	4	3.0	DE	DSC
2		DEPARTMENT ELECTIVE 5	3	0	0	3.0	DE	DSC
3		OPEN MINOR/OPEN ELECTIVE 4	3	0	0	3.0	OM	OEM
4		PATHWAY ELECTIVE 3	3	0	0	3.0	PW	PWE
5		PATHWAY ELECTIVE 4	3	0	0	3.0	PW	PWE

6	CAP347	CAPSTONE PROJECT-II	0	0	16	8.0	CR	PRJ
TOTAL			12.0	0.0	20.0	23.0		

DEPARTMENT ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit
1	CAP375	GAME DESIGN-II	0	0	4	3.0
2	CAP613	CRYPTOGRAPHY AND SECURITY RISK MANAGEMENT	3	0	0	3.0
3	CAP725	DIGITAL MARKETING	0	0	4	3.0
4	CAP908	SOFTWARE PROJECT MANAGEMENT	0	0	4	3.0

DEPARTMENT ELECTIVE 5 BASKET

S. No	Course Code	Course Title	L	T	P	Credit
1	CAP337	SOFTWARE BUSINESS	3	0	0	3.0
2	CAP653	ARTIFICIAL INTELLIGENCE	3	0	0	3.0
3	CAP905	OPERATING SYSTEMS-LABORATORY	0	0	4	3.0
4	CAP906	FUNDAMENTALS OF PYTHON	0	0	4	3.0

PATHWAY ELECTIVE 3 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Elective Area
1	ERT421	PROTOTYPING AND PRE-INCUBATION-II	0	0	6	3.0	BOOT CAMP
2	CAP911	DATABASE ARCHITECTURE	0	0	5	3.0	DATABASE
3	ERT417	PRODUCT DEVELOPMENT AND MARKET LAUNCH	0	0	6	3.0	ENTREPRENEURSHIP
4	ERT413	FAMILY BUSINESS GROWTH-EXECUTION	0	0	6	3.0	FAMILY BUSINESS
5	CAP369	REAL TIME SYSTEMS	3	0	0	3.0	GOVERNMENT JOBS
6	CAP369	REAL TIME SYSTEMS	3	0	0	3.0	HIGHER STUDIES
7	CAP914	MOBILE APP DEVELOPMENT WITH XAMARIN FORMS	0	0	5	3.0	MOBILE APP DEVELOPMENT
8	CAP920	CYBER SECURITY AWARENESS	0	0	5	3.0	NETWORKING AND SECURITY
9	CAP924	PRINCIPLES OF ROUTING AND SWITCHING	0	0	5	3.0	SYSTEM AND ARCHITECTURE
10	CAP918	MULTIPLATFORM MOBILE APP	0	0	5	3.0	WEB DESIGN AND DEVELOPMENT

PATHWAY ELECTIVE 4 BASKET

S. No	Course Code	Course Title	L	T	P	Credit	Elective Area
1	ERT422	PROTOTYPING AND PRE-INCUBATION-III	0	0	6	3.0	BOOT CAMP
2	CAP912	MIDDLEWARE ARCHITECTURE	0	0	5	3.0	DATABASE
3	ERT418	BUILDING BUSINESS	0	0	6	3.0	ENTREPRENEURSHIP
4	ERT414	FAMILY BUSINESS GROWTH-II	0	0	6	3.0	FAMILY BUSINESS
5	CAP547	EXPERT SYSTEM	3	0	0	3.0	GOVERNMENT JOBS
6	CAP547	EXPERT SYSTEM	3	0	0	3.0	HIGHER STUDIES
7	CAP915	MOBILE APP PROGRAMMING TOOLS	0	0	5	3.0	MOBILE APP DEVELOPMENT
8	CAP921	DIGITAL FORENSICS	0	0	5	3.0	NETWORKING AND SECURITY
9	CAP925	BASICS OF BUSINESS PROCESS OUTSOURCING BPO	0	0	5	3.0	SYSTEM AND ARCHITECTURE
10	CAP919	SERVER-SIDE DEVELOPMENT WITH NODEJS	0	0	5	3.0	WEB DESIGN AND DEVELOPMENT

Term 6 (For those students who opt for industrial internship)								1102A-6-2017

S.No	Course Code	Course Title	L	T	P	Credit	Type	Nature
1	CAP449	INDUSTRY CO-OP PROJECT	0	0	32	16.0	CR	TCF
TOTAL			0.0	0.0	32.0	16.0		

Open Minor Elective (OM) Basket

S.No	Course Code	Course Title	L	T	P	Credit	Elective Area
1	ERT401	INNOVATION AND DESIGN THINKING	0	0	3	2.0	Design Thinking & Innovation
2	ERT402	CREATIVITY AND INNOVATION TOOLS	0	0	3	2.0	Design Thinking & Innovation
3	ERT403	CUSTOMER RESEARCH AND IDEATION	0	0	3	2.0	Design Thinking & Innovation
4	ERT404	BUSINESS MODELLING	0	0	3	2.0	Design Thinking & Innovation
5	FIN214	INTRODUCTION TO FINANCIAL MARKETS	3	0	0	3.0	FINANCIAL MARKETS
6	FIN215	MUTUAL FUNDS AND EXCHANGE TRADED FUNDS	3	0	0	3.0	FINANCIAL MARKETS
7	FIN309	CAPITAL MARKET OPERATIONS	0	0	3	2.0	FINANCIAL MARKETS
8	FIN358	DERIVATIVE MARKET OPERATIONS	3	0	0	3.0	FINANCIAL MARKETS
9	HMT234	TOURISM DESTINATIONS-I	3	0	0	3.0	TOURISM DESTINATION BASICS
10	HMT235	TOURISM DESTINATIONS-II	3	0	0	3.0	TOURISM DESTINATION BASICS
11	HMT236	WORKSHOP ON ONLINE DESTINATION MANAGEMENT-I	0	0	3	2.0	TOURISM DESTINATION BASICS
12	HMT237	WORKSHOP ON ONLINE DESTINATION MANAGEMENT-II	0	0	3	2.0	TOURISM DESTINATION BASICS

The list of Open Minor Elective courses to be offered in a term is subject to change from time to time.
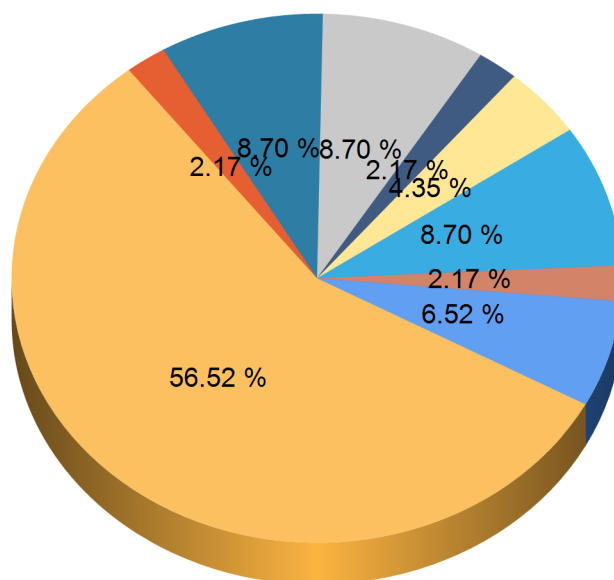
Important Points

• The calculation of Total Contact hours in Lecture (L), Tutorial (T) and Practical (P) for Elective Course slots reflecting the minimum L, T and P of a course in Elective Basket.
• Every Course has a 'Type' and 'Nature' which defines its character.

Course Type	
CR	Core Course
DE	Departmental Elective
LC	Language Core
OM	Open/Minor
PW	Pathway Elective

Course Nature	
BSC	Basic Science
DSC	Discipline Core
HSS	Humanities and Social Sciences
LCS	Language & Communication Skills
OEM	Open Minor/Open Elective
PEP	Professional Enhancement
PRJ	Project (including Capstone Project and Research Project)
PWE	Pathway Elective
TCF	Training Compulsory – Full term
TCS	Training Compulsory - Summer

Program Structure

Legend: BSC · HSS · LCS · OEM · PEP · PRJ · PWE · TCS · DSC

Pie chart values: 8.70 %, 8.70 %, 2.17 %, 2.17 %, 4.35 %, 8.70 %, 2.17 %, 6.52 %, 56.52 %

Sr No	NAME	Nature Name	Total
1	BSC	Basic Science	3
2	DSC	Discipline Core	26
3	HSS	Humanities and Social Sciences	1
4	LCS	Language & Communication Skills	4
5	OEM	Open Minor/Open Elective	4
6	PEP	Professional Enhancement	1
7	PRJ	Project (including Capstone Project and Research Project)	2
8	PWE	Pathway Elective	4
9	TCS	Training Compulsory - Summer	1