



FATIMA COLLEGE (AUTONOMOUS), MADURAI - 625018

NAME OF THE PROGRAMME: B. SC INFORMATION TECHNOLOGY

PROGRAMME CODE: USIT

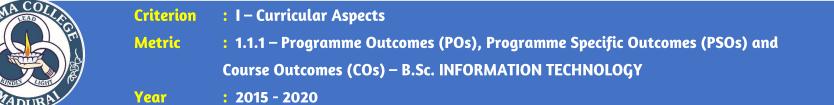
PROGRAMME OUTCOMES:

The learners will be able to

- **PO1:** Apply acquired scientific knowledge to solve complex issues.
- **PO2:** Attain Analytical skills to solve complex cultural, societal and environmental issues.
- **PO3:** Employ latest and updated tools and technologies to analyse complex issues.
- **PO4:** Demonstrate Professional Ethics that foster Community, Nation and Environment Building Initiatives.

PROGRAMME SPECIFIC OUTCOMES:

- **PSO 1:** Apply computational techniques and software principles for designing of software systems.
- **PSO 2:** Develop efficient and effective software systems using modern computer techniques.
- **PSO 3:** Acquire fundamental concepts, methods and practices of Information Technology to develop theoretical and practical skill sets.





- **PSO 4:** Justify the optimum technique to allocate memory resources, processors, I/O peripherals to provide optimal programmatic solution to a real-world problem.
- **PSO 5:** Support to gain skills on basic as well as trendy software languages and packages to design web sites, web apps, mobile apps and real time software projects.
- **PSO 6:** Promote the students to generalize and distinguish the characters of different systems for different environment.
- **PSO 7:** Trigger the students to enrol in to the research areas of IT industry like cloud computing and data analytics.
- PSO 8: Able to become entrepreneur and to pursue career in IT industries





Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



2019-2020

Course Code	Course Title	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OUTCOMES
19I1CC1	Fundamentals of Computing	Global	This course content plays a vital role in building the basic concepts in computers and the fundamental knowledge in programming.	



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



				and Files.
19I1CC2	Lab I - Programming In C	Global	This course content plays a vital role in building the basic programming skill in C language.	 CO1: Know the concept of Problem solving. CO 2: Implement various concepts in C CO 3: Apply the concepts of Functions, Structures and Unions in C program CO 4: Make use of pointers using C programs. CO 5: Apply and Use the file concepts in C programs
19I1NME	Multimedia Applications	Global	This course content enables other Major students to strengthen and increase the understanding of basis Multimedia application	 CO 1: Construct simple vector graphics using basic drawing elements and shape commands. CO 2: Apply basic shape commands and image effects in processing raster

encapsulation, inheritance and

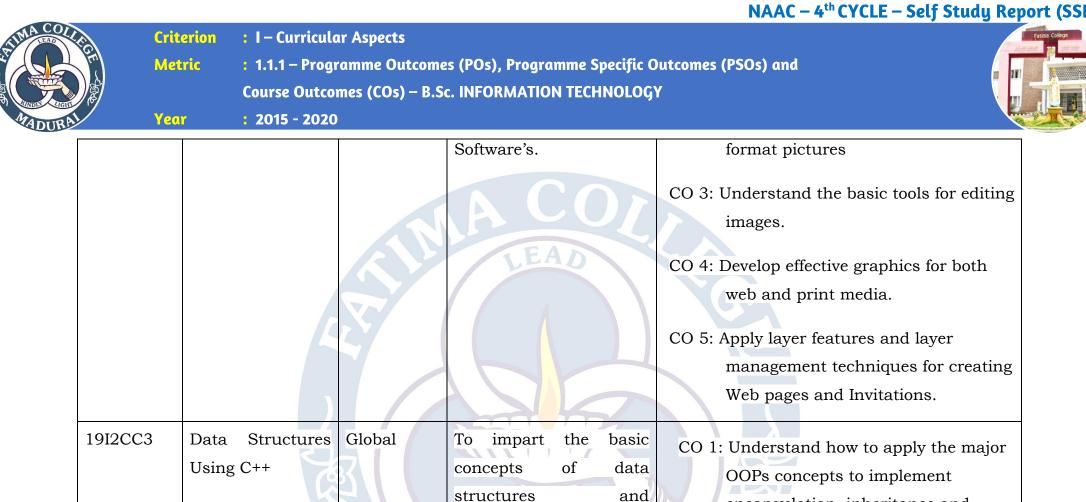
CO 2: Implement an achievable practical

application and analyse issues

related to object-oriented techniques

in the C++ programming language

polymorphism



concepts about stacks,

sorting techniques 3 To

2

To

and

basic

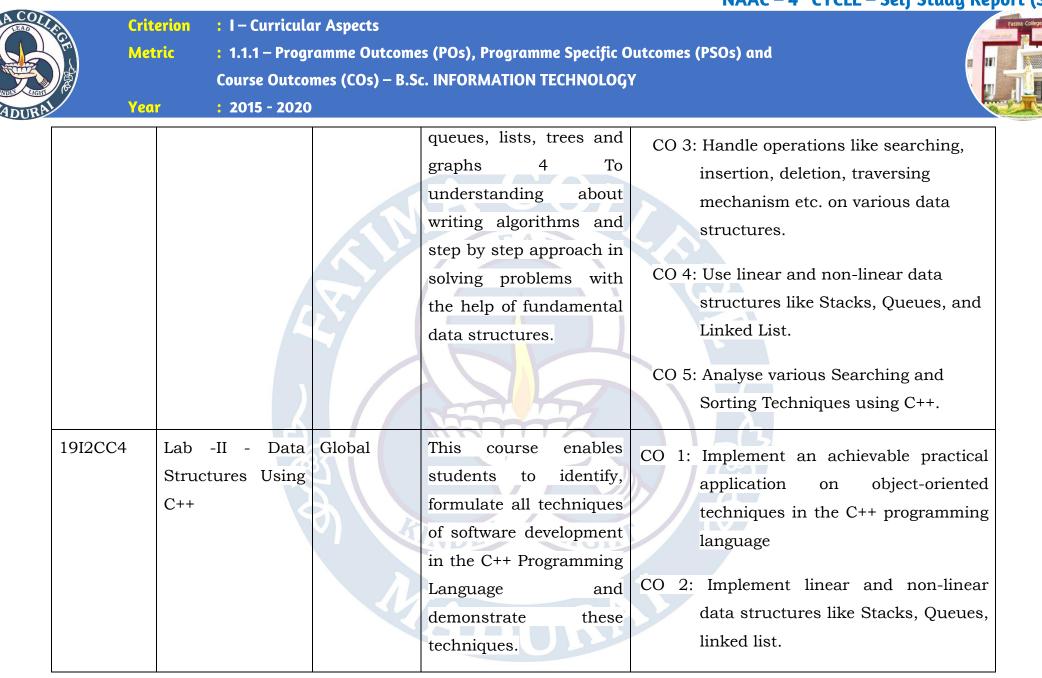
concepts

algorithms

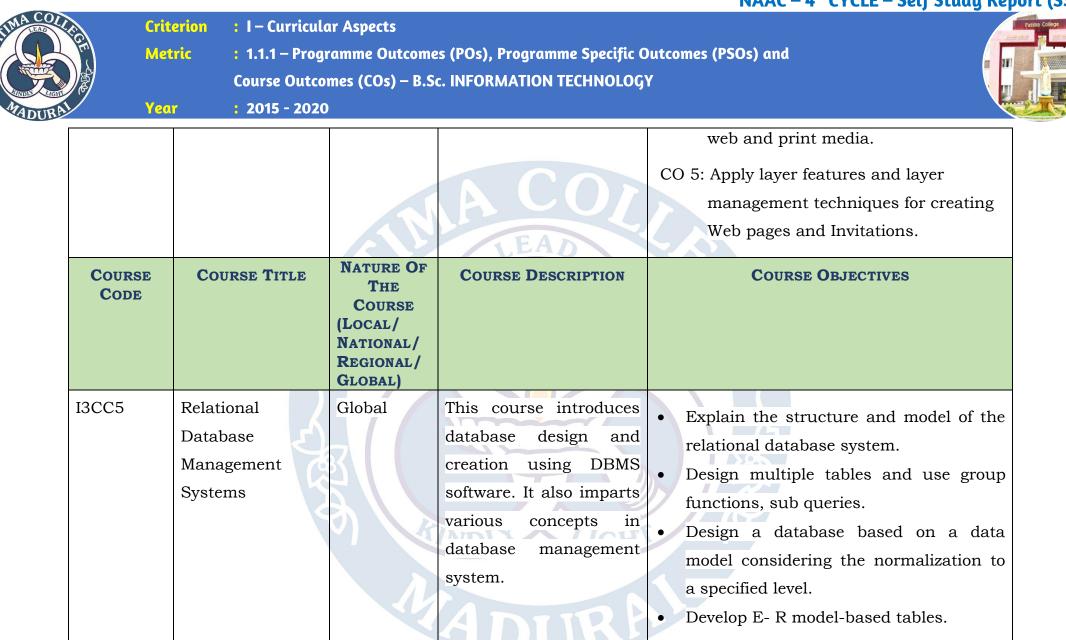
understand

Understand

about searching



			NAAC – 4 th CYCLE – Self Study Report (S
	Metric : 1.1 Cour		comes (POs), Programme Specific Outcomes (PSOs) and - B.Sc. INFORMATION TECHNOLOGY
1912NME		a Global	 CO 3: Demonstrate the concept of classes and their types by using C++ objects. CO 4: Apply the concept of polymorphism and inheritance in C++ CO 5: Implement practical applications by applying Searching and Sorting Techniques using C++ CO 1: Construct simple vector graphics using basic drawing elements and shape commands. CO 2: Apply basic shape commands and image effects in processing raster format pictures CO 3: Understand the basic tools for editing images. CO 4: Develop effective graphics for both



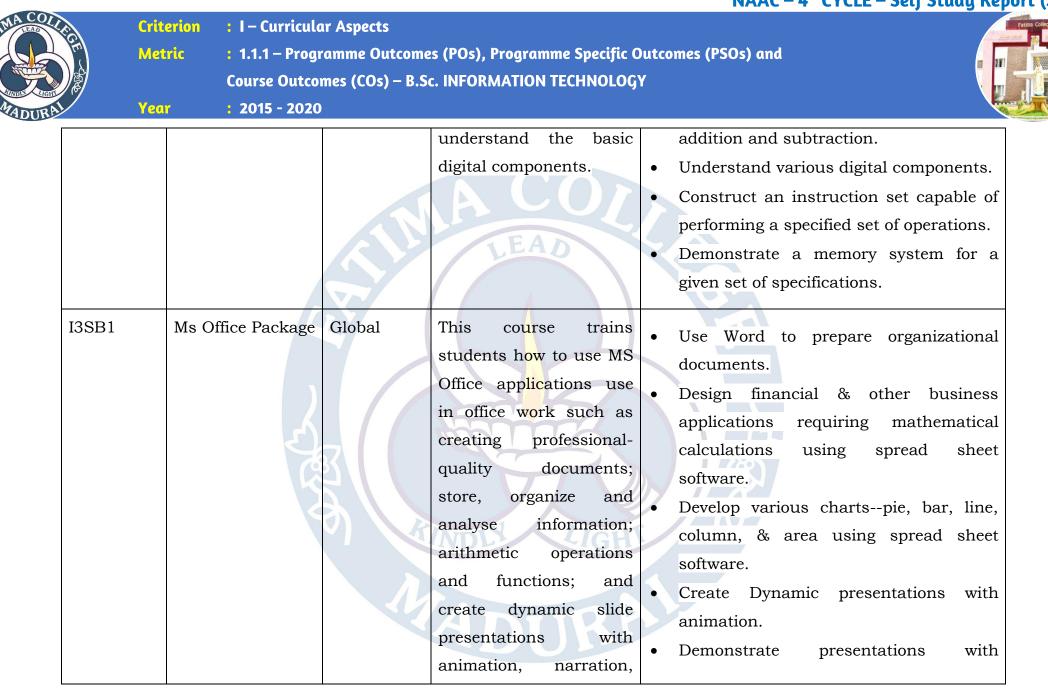
• Evaluate different PL/SQL blocks.



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



I3CC6	Lab –III - RDBMS	Global	This course gives hands on experience in relational database management system.	 Explain Various SQL Commands. Write SQL queries to user specifications Design database schema considering normalization and relationships within database. Develop PL/SQL Programs. Develop triggers, procedures and Cursors.
I3CC7	Trends in Information Technology	Global	Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.	• Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
I3AC3	Digital Principles And Computer Architecture	Global	This course content plays a vital role in making the students to	 Explain about digital logic circuits. Compute simple arithmetic operations for fixed-point and floating-point





Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Yee	ır : 2015 - 2020)		
I4CC8	Programming in Java	Global	images, and much more, digitally and effectively. This course enables the students to build object- oriented java programs using the concept of abstraction, encapsulation, exception handling, packages, interfaces, threads and AWT controls. It also imparts the ability to develop projects in java with JDBC connectivity.	 Offented Programming & Java Programming Constructs. Understand basic concepts of Java such as operators, classes, objects ,in heritance, packages, Enumeration and various keywords. Understand the concept of exception handling and Input/output operations. Design Java & Java applet-based
I4CC9	Lab IV - Java Lab	Global	This course gives hands on experience, practices the concepts of java	 Handling and Abstract Window Toolkit. Implement Object Oriented programming concept using operators and control Structures.

Yeor		ies (POs), Programme Specific Outo Sc. INFORMATION TECHNOLOGY	
I4CC10 Opt	erating Global tems	programming language, and develops solutions for real world problems. • • • • • • • • • • • • • • • • • • •	Design java programs using inheritance, interfaces and packages. Implement exception handling mechanism and multithreading concept. Design Java applet-based applications. Design applications to Handle Events using AWT components. Describe the evolution, types, structure and Understand the process management policies and scheduling of processes by CPU Evaluate the requirement for process synchronization and coordination handled by operating system Describe and analyze the memory management and its allocation policies. Identify use and evaluate the storage management policies with respect to

atima College

eter - Constant	•	gramme Outcome omes (COs) - B.S	es (POs), Programme Specific C c. INFORMATION TECHNOLOG	u 🛛
I4AC4	Enterprise Resource Planning	Global	This Course provide a contemporary and forward-looking on the theory and practice of Enterprise Resource Planning Technology to focus on a strong emphasis upon practice of theory in Applications and Practical oriented approach	strategies.
I4SB2	Quantitative Aptitude	Global	This course content plays a vital role for clearing any competitive	 Understand the short cut methods. Apply general mathematical techniques. Develop their critical thinking.

STIMA C



 Criterion
 : I - Curricular Aspects

 Metric
 : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY

 Year
 : 2015 - 2020



	. 2013 - 2020				
	Web Technology		exam and it covers all the Quantitative Aptitude topics and an in-depth understanding of this subject.		Recall the formulas. Solve the sums by applying shortcut methods with time management
I5CC11	Web Technology	Global	To acquire knowledge and skills for creation of web site considering both client and server- side Students will able to implement interactive web page(s) using HTML, CSS and JavaScript. Able to design a responsive web site using HTML and CSS. To gain ability to develop responsive web applications. To explore	•	 Implement interactive web page(s) using HTML, CSS and JavaScript. Design a responsive web site using HTML5 and CSS To gain ability to develop responsive web applications. To explore different web extensions and web services standards To be familiarized with PHP web framework



Year

: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



			different web extensions	
			and web services	
			standards	
I5CC12	Lab V - Web Technology Lab	Global	This course gives hands on experience in Web development Technologies.	 Explain Various HTML tags. Design WebPages with advanced HTML controls. Design Web pages using CSS Develop client side Scripting using JavaScript Develop WebPages with XML.
I5CC13	Data Communication And Networking	Global	This course is to provideinformationaboutvariousdatacommunicationtechniqueslikeswitchingandnetworkingconceptswhichincludeslayers	 Describe the components of a data communications system Identify key considerations in selecting various switching techniques and various transmission media in networks Describe the various types of Protocols in Network layer and their features Illustrates the functionality of transport



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Year : 2015 - 2020

I5CC14	Data Mining Concepts	Global	and their corresponding protocols. This course introduces the basic concepts, principles, methods, implementation techniques, and applications of data mining.		layer and their corresponding protocols. Analyse different usage of application layer protocols Identify data mining tools and techniques in building intelligent machines. Understand different pre-processing techniques. Analyse various data mining algorithms while applying in real time applications. Compare various supervised and unsupervised learning techniques in
I5CC15	Software Engineering	Global	This course introduces the basic steps involved	•]	Understand how to plan a software project.

Year	ourse Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY 2015 - 2020
I5ME1 Inform Storma Mana	• Know the concepts of Storage and Data

ACE - CON		gramme Outcome omes (COs) – B.Sc	es (POs), Programme Specific O 5c. INFORMATION TECHNOLOG	
I5ME2	Multimedia Technologies	Global	informed decisions in an increasingly complex IT environment. To understand the characteristics of different media; understand the representations of different multimedia data; understand different data formats; be able to take into considerations in multimedia system designs	 classic and virtualized environment. Analyse, Monitoring and managing the storage infrastructure in cloud environments. It contributes to having students practice their communication skills and demonstration ability with project presentation. It contributes to forming the global outlook that can affect the way
I5SB3	Image Designing	Global	This course introduces	• Construct simple vector graphics by



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



Al Ye	ar : 2015 - 2020				
	Software		the concepts and tools for design, create and manipulate images for integration in publication layout and web output by using the software tool.		using basic drawing elements and shape commands. Apply basic shape commands and image effects in processing raster format pictures Design and edit images using image- editing tool. Apply layer features for creating images for web and print. Develop effective graphics for both web and print media.
I5SB4	Web Design Using Dreamweaver	Global	To Identify Dreamweaver fundamentals to create websites, create web pages, insert tables and import content into web pages, create reusable site assets. Link web pages and send the	•	Design a complete website Design WebPages with audio, video, flash, java applets and images. Design different layout styles which includes backend programming Applying variety of Fonts Design Forms, Frames, Tables Design Cascading Styles



Year

: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



			website to the server.	Sheets Create Database connectivity.
I6CC16	.Net Programming	Global	To describe the concepts of logic preparation; to recognize and explain the benefits of procedural, event driven, and object- oriented languages.	 To explain the basics of GUI design work with Visual Basic Forms, Tool Box controls and Properties; To be able to design and create Windows programs using the Visual Basic .NET programming language; To design and program using classes a completely documented Visual Basic .NET project
I6CC17	Lab VINet Programming Lab	Global	This course covers the concepts touser for developing interactive web pages using ASP.Net. Able to performing Database operations for Windows Form and web	 Create user interactive web pages using ASP.Net. Create simple data binding applications using ADO.Net connectivity. Performing Database operations for Windows Form and web applications.



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



			applications	
I6CC18	Information Security	Global	The course covers the basics of the science of encryption and network security technology. It also provides the knowledge about the various risks that networks are faced with in this day and age, focussing on the various vulnerabilities of systems.	• Analyse various cryptographic
I6CC19	Project Lab	Global	Support to gain skills on basic as well as trendy software languages and packages to design web sites, web	• Gather software requirement specifications and prepare design for real time problems

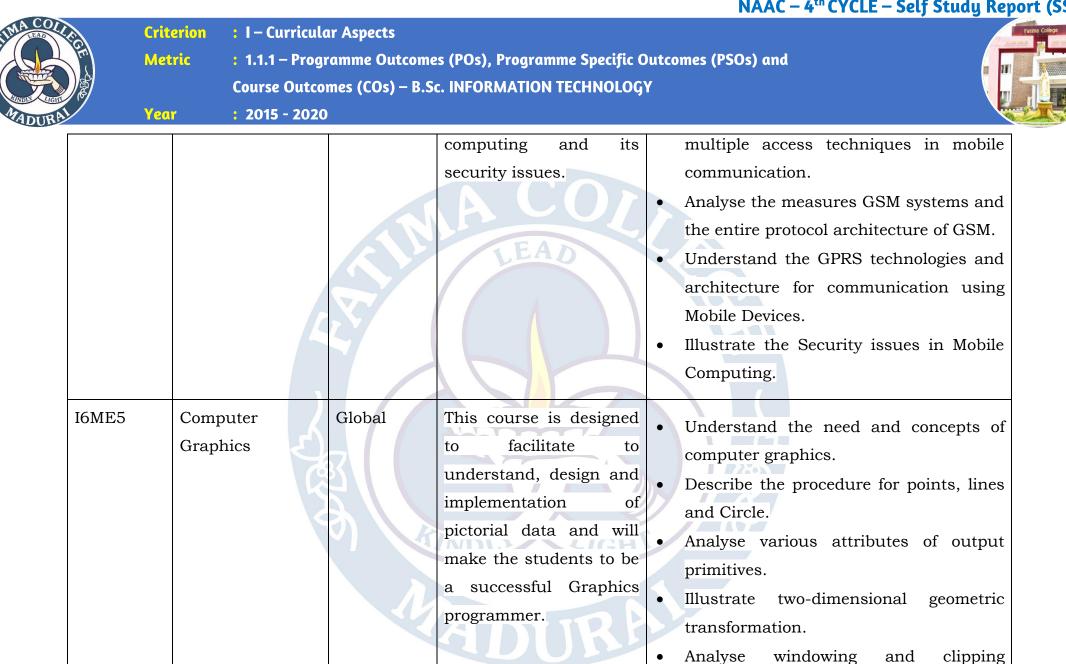


Criterion : I – Curricular Aspects

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Yea	r : 2015 - 2020			
I6ME3	Cloud Computing	Global	apps, Mobile apps and real time software projects. This course facilitates the students to understand, analyse the various applications of cloud tool and also provide solutions for cloud security and storage.	 Understand fundamental concepts of cloud service and deployment models. Identify the importance of virtualization along with their technologies. Analyse different cloud computing Services. Analyse the components and the security in cloud. Illustrate different design & develop backup strategies for cloud data based on features.
I6ME4	Mobile Computing	Global	This course gives the ability to acquire the knowledge about the technologies in mobile	 Understand the infrastructure to develop mobile communication systems. Identify the characteristics of different





Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				concepts.
I6ME6	Internet & E- Commerce	Global	Presents concepts and skills for the strategic use of e-commerce and related information technology from three perspectives: business to consumers, business- to-business, and intra- organizational.	 To examine in detail what is meant by the term 'e-commerce' examine some typical distributed applications detail some of the problems that are encountered when developing distributed applications describe briefly some of the technologies that are used to support distributed applications
I6SB5	3d Animation Software	Global	This course is designed to facilitate different animation techniques in animation software	 Understand basic concepts in Alice. Construct a scene. Build program in Alice using looping and branching. Apply event handlers in alike. Develop 3D animations.



Year

: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



I6SB6	Image Editing Software	Global	Use basic selection tools and edge refinement to isolate and edit parts of an image. Manipulate	 Design layouts for web pages, Paper Adverts, Broachers, CD Covers, Package Designing Event and Exhibition stall
			layers through ordering, positioning, scaling, rotation, and adjustments. Create composite images that	 Designs, Pop Ups Touch Ups Colour corrections Paintings, Drawings Converting B/W photo to colour
	Z	3	demonstrate advanced selection and layering techniques.	

(ADD)



Criterion : I – Curricular Aspects

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



2018 - 2019

Course Code	Course Title	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
IICC1	Computer Fundamentals & C Programming	Global	This course content plays a vital role in building the basic concepts in computers and the fundamental knowledge in programming	 Understand the basic concepts in Computer & C Programming. Identify and Apply different construct available for iteration such as 'for', 'while' and 'do-while'. Understand various storage concepts. Develop C programs using functions. Summarize the concepts of Pointers and Files.
IICC2	C Programming Lab	Global	This course content plays a vital role in building the basic	 Know the concept of Problem solving. Implement various concepts in C Apply the concepts of Functions,

¥ γ₀	ar : 2015 - 202		c. INFORMATION TECHNOLOG	
			programming skill in C language.	 Structures and Unions in C program Make use of pointers using C programs. Apply and Use the file concepts in C programs
I1NME1	Multimedia Applications	Global	This course content enables other Major students to strengthen and increase the understanding of basis Multimedia application Software's.	 Construct simple vector graphics using basic drawing elements and shape commands. Apply basic shape commands and image effects in processing raster formal pictures Understand the basic tools for editing images. Develop effective graphics for both well and print media. Apply layer features and layer management techniques for creating Web pages and Invitations.



Criterion : I – Curricular Aspects Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY Year : 2015 - 2020



	2015 - 2020				
	&C++		the basic concepts of		OOPs concepts to implement
	Programming		C++. It also aims a		encapsulation, inheritance and
			facilitate the students to		polymorphism
			know the Data Structure	•	Implement an achievable practical
			concepts.		application and analyse issues related to
					object-oriented techniques in the C++
					programming language
				•	Handle operations like searching,
					insertion, deletion, traversing
					mechanism etc. on various data
	7				structures.
				•	Use linear and non-linear data
)	structures like Stacks, Queues, and
	<				Linked List.
			INDLYLIGH		Analyse various Searching and Sorting
					Techniques using C++.
I2CC4	Lab II - C++ Lab	Global	This course enables	•	Implement an achievable practical
			students to identify		application on object-oriented
			formulate all techniques		techniques in the C++ programming

						NAAC – 4 th CYCLE – Self Study Repo	rt (S
	Criterion Metric	Course Outco	ramme Outcomo omes (COs) – B.S	es (POs), Programme Specific C c. INFORMATION TECHNOLOG		omes (PSOs) and	Fatima Colleg
ADURAL	Year	: 2015 - 2020)	· · · · · · · · · · · · · · · · · · ·			
				of software development		language	
				in the C++ Programming	•	Implement linear and non-linear data	
				Language and		structures like Stacks, Queues, linked	
				demonstrate these		list.	
				techniques.		Demonstrate the concept of classes and	
						their types by using C++ objects.	
					•	Apply the concept of polymorphism and	
						inheritance in C++	
					•	Implement practical applications by	
						applying Searching and Sorting	
						Techniques using C++	
I2NMI	E2 Mult	imedia	Global	This course content	•	Construct simple vector graphics using	
		ications	HIL	enables other Major		basic drawing elements and shape	
				students to strengthen		commands.	
				and increase the	-	Apply basic shape commands and image	
				understanding of basis		effects in processing raster format	
				Multimedia application		pictures	
						1	
				Software's.	•	Understand the basic tools for editing	

A COLLEG		amme Outcomes (POs), Programme Specific (mes (COs) – B.Sc. INFORMATION TECHNOLOG	
I3CC5	Relational Data Base Management Systems	NA COZ	 Develop effective graphics for both web and print media. Apply layer features and layer management techniques for creating Web pages and Invitations. Explain the structure and model of the relational database system. Design multiple tables and use group functions, sub queries. Design a database based on a data model considering the normalization to a specified level. Develop E- R model-based tables. Evaluate different PL/SQL blocks.
I3CC6	Lab IV - RDBMS Lab	Global This course gives hands on experience in relational database management system.	 Explain various SQL Commands. Write SQL queries to user specifications

		omes (COs) – B.S	es (POs), Programme Specific Ou c. INFORMATION TECHNOLOGY	
			A COZ	 Develop PL/SQL Programs. Develop triggers, procedures and Cursors.
I3CC7	Trends in Information Technology	Global	Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.	 Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. Communicate effectively in a variety of professional contexts
I3AC3	Digital Principles And Computer Architecture		adun	 Explain about digital logic circuits. Compute simple arithmetic operations for fixed-point and floating-point addition and subtraction. Understand various digital components. Construct an instruction set capable of performing a specified set of operations. Demonstrate a memory system for a

ALLA C



Year

: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				given set of specifications.
I3SB1	MS Office Package	Global	This course trains students how to use MS Office applications use in office work such as creating professional- quality documents; store, organize and analyse information; arithmetic operations and functions; and create dynamic slide presentations with animation, narration, images, and much more, digitally and effectively.	 Design infancial & other business applications requiring mathematical calculations using spread sheet software. Develop various chartspie, bar, line, column, & area using spread sheet software. Create Dynamic presentations with animation.
I4CC8	Programming in Java	Global	This course enables the students to build object-	• Understand the concepts of Object- Oriented Programming & Java



 Criterion
 : I - Curricular Aspects

 Metric
 : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY

 Year
 : 2015 - 2020



	Year	: 2015 - 2020				
		2		oriented java programs using the concept of abstraction, encapsulation, exception handling, packages, interfaces, threads and AWT controls. It also imparts the ability to develop projects in java with JDBC connectivity.		Programming Constructs. Understand basic concepts of Java such as operators, classes, objects, inheritance, packages, Enumeration and various keywords. Understand the concept of exception handling and Input/output operations. Design Java & Java applet-based applications. Analyse& Design the concept of Event Handling and Abstract Window Toolkit.
I4CC9		Lab IV - Java Lab	Global	This course gives hands on experience, practices the concepts of java programming language, and develops solutions for real world problems.	•	ImplementObjectOrientedprogrammingconceptusingoperatorsand controlStructures.Structures.Designjavaprogramsusinginterfacesandpackages.Implementexceptionhandlingmechanismandmultithreadingconcept.



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



		A COI	• •	Design Java applet-based applications. Design applications to Handle Events using AWT components.
Operating Systems	Global	To understand the main components of an OS & their Students will able to: 1. Describe the important computer system resources and the functions. 2. To study the process management and scheduling.3. To understand various issues in Inter Process Communication (IPC) and the role of OS in		Describe the evolution, types, structure and Understand the process management policies and scheduling of processes by CPU Evaluate the requirement for process synchronization and coordination handled by operating system Describe and analyze the memory management and its allocation policies. Identify use and evaluate the storage management policies with respect to different storage management technologies. Identify the need to create the special purpose operating system.



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and

Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Year : 2015 - 2020

			IPC. 4. To understand the concepts and implementation Memory management policies and virtual memory. 5. To understand the working of an OS as a resource manager, file system manager, process manager, memory manager and	
			process manager,	
I4AC4	Enterprise Resource	Global	This Course provide a contemporary and	• Make basic use of Enterprise software, and its role in integrating business

					NAAC – 4 th CYCLE – Self Study Repor
ARC:	Criterion				
	Metric			ies (POs), Programme Specific O Sc. INFORMATION TECHNOLOGY	
	Year	2015 - 2020		Sc. INFORMATION TECHNOLOGY	
	•	ning		forward-looking on the theory and practice of Enterprise Resource Planning Technology to focus on a strong emphasis upon practice of theory in Applications and Practical oriented approach	identification and adoption.Design the ERP implementation
I4SB2	Quar Aptit	untitative itude	Global	This course content plays a vital role for clearing any competitive exam and it covers all the Quantitative Aptitude topics and an in-depth understanding of this subject.	 Recall the formulas. Solve the sums by applying shortcut methods with time management
I5CC11	1 Web	o Technology	Global	To acquire knowledge	• Implement interactive web page(s) using

					NAAC – 4 th CYCLE – Self Study Repo
ALL CONTRACTOR	Criterion Metric		amme Outcome	es (POs), Programme Specific O c. INFORMATION TECHNOLOG	
	Year	: 2015 - 2020			
				and skills for creation of web site considering both client and server- side Students will able to implement interactive web page(s) using HTML, CSS and JavaScript. Able to design a responsive web site using HTML and CSS. To gain ability to develop responsive web applications. To explore different web extensions and web services standards	 Design a responsive web site using HTML5 and CSS To gain ability to develop responsive web applications. To explore different web extensions and web services standards
I5CC12	Web Lab	Technology	Global	This course is designed to enable the students to:	 Integrate frontend and backend web technologies in distributed systems. Facilitate interface between frontend

(FIII)



on : I – Curricular Aspects : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY



	Year : 2015 - 2020)		
			 Understand the web technologies to create adaptive web pages for web application. use CSS to implement a variety of presentation effects to the web application know the concept and implementation of cookies as well as related privacy concerns Develop a sophisticated web application 	and backend of a web application
I5CC13	Data Communication And Networking	Global	This course is to provideinformationaboutvariousdata	 Describe the components of a data communications system Identify key considerations in selecting



 I - Curricular Aspects
 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Al Year	: 2015 - 2020		
		communication techniques like switching and networking concepts which includes layers and their corresponding protocols.	 various switching techniques and various transmission media in networks Describe the various types of Protocols in Network layer and their features Illustrates the functionality of transport layer and their corresponding protocols. Analyse different usage of application layer protocols
	Data Mining Global Concepts	This course introduces the basic concepts, principles, methods, implementation techniques, and applications of data mining.	 Identify data mining tools and techniques in building intelligent machines. Understand different pre-processing techniques. Analyse various data mining algorithms while applying in real time applications. Compare various supervised and unsupervised learning techniques in data mining.



Year

: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



-					
				•	Illustrate the mining techniques like
					association, classification and
			A COT		clustering.
I5CC15	Software	Global	This course introduces	4	Understand how to plan a software
	Engineering		the basic steps involved		project.
			in Software Development	•	Analyse the cost estimate and problem
			Life Cycle (SDLC).		complexity using various estimation
					techniques.
				•	Prepare the SRS, Design document,
	7				Project plan of a given software system.
	L'AND C			•	Apply Software design and
					implementation ideas in S/W project
					development.
			NDLY LIGHT	•	Generate test cases using White Box
					testing and Black Box testing.
I5ME1	Information	Global	This course provides a		Know the concepts of Storage and Data
	Storage And		comprehensive		structure Environment based on growth
	Management		understanding of the		and challenges in IT.



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



 infrastructure components in classic and virtual environments. It enables the students to make informed decisions in an increasingly complex IT infrastructure related and recent techniques. Identify the parameters of managing monitoring the storage infrastructure and manage the solutions. Know backup and archival data in classic and virtualized environment. 			various storage	• Understand data protection by using
 components in classic Identify the parameters of managing monitoring the storage infrastrue and virtual environments. It enables the students to make informed decisions in an increasingly complex IT Identify the parameters of managing monitoring the storage infrastrue and manage the solutions. Know backup and archival data in classic and virtualized environment. Analyse, Monitoring and managing 			8	
 and virtual environments. It enables the students to make informed decisions in an increasingly complex IT Analyse, Monitoring and managing 			infrastructure	related and recent techniques.
 environments. It enables the students to make informed decisions in an increasingly complex IT Analyse, Monitoring and managing 			components in classic	 Identify the parameters of managing and
 the students to make informed decisions in an increasingly complex IT Know backup and archival data in classic and virtualized environment. Analyse, Monitoring and managing 			and virtual	monitoring the storage infrastructure
informed decisions in an increasingly complex IT • Analyse, Monitoring and managing			environments. It enables	and manage the solutions.
increasingly complex IT • Analyse, Monitoring and managing			the students to make	• Know backup and archival data in both
initiajee, montering una managing			informed decisions in an	classic and virtualized environment.
environment. storage infrastructure in c			increasingly complex IT	• Analyse, Monitoring and managing the
			environment.	storage infrastructure in cloud
environments.				environments.
I5ME2 Multimedia Global To understand the It contributes to having stud	2 Multimedia	Global	To understand the	• It contributes to having students
Technologies characteristics of practice their communication skills	Technologies		characteristics of	practice their communication skills and
different media:			different media;	
understand the presentation.			understand the	
representations of			representations of	• It contributes to forming the global
different multimedia outlook that can affect the			different multimedia	
data: understand			data; understand	computing systems are developed and
different data formats; used.			different data formats;	
be able to take into			he able to take into	4004



: 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY



			considerations in multimedia system	•	This subject contributes to developing student critical thinking through
		N	designs		lectures and lab exercises on solving problems.
I5SB3	Image Designing Software	Global	This course introduces the concepts and tools for design, create and manipulate images for integration in publication layout and web output by using the software tool.		Construct simple vector graphics by using basic drawing elements and shape commands. Apply basic shape commands and image effects in processing raster format pictures Design and edit images using image- editing tool. Apply layer features for creating images for web and print. Develop effective graphics for both web and print media.
I5SB4	Web Design Using	Global	To Identify Dreamweaver fundamentals to create	•	Design a complete website Able to include to audio, video, flash, java



 Criterion
 : I - Curricular Aspects

 Metric
 : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and

 Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY

 Year
 : 2015 - 2020



Y 20.	2015 - 2020				
	Dreamweaver		websites, create web pages, insert tables and import content into web pages, create reusable site assets. Link web pages and send the website to the server.	•	applets and images. Design different layout styles which includes backend programming Applying variety of Fonts Design Forms, Frames, Tables Design Cascading Styles Sheets Create Database connectivity.
I6CC16	.Net Programming	Global	To describe the concepts of logic preparation; to recognize and explain the benefits of procedural, event driven, and object- oriented languages.	·	To explain the basics of GUI design work with Visual Basic Forms, ToolBox controls and Properties; To be able to design and create Windows programs using the Visual Basic .NET programming language; To design and program using classes a completely documented Visual Basic .NET project
I6CC17	.Net Programming Lab	Global	This course covers the concepts touser for	•	Create user interactive web pages using ASP.Net.

			NAAC – 4 th CYCLE – Self Study Rej
LIFE	Criterion	: I – Curricular Aspects	
L ITT	Metric	: 1.1.1 – Programme Outcom	nes (POs), Programme Specific Outcomes (PSOs) and
		Course Outcomes (COs) - B.S	Sc. INFORMATION TECHNOLOGY
RAL	Year	: 2015 - 2020	
I6CC18	Info Secu:	rmation rity Global	developinginteractive webCreate simple data binding applicationsMSP.Net.Ableto performingPerforming Database operations for WindowsPerforming Database operations for Windows Form and web applicationsThe course covers the basics of the science of encryption and network security technology. It also provides the

ATTINA .



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



I6CC19	Project Lab	Global	Support to gain skills on basic as well as trendy software languages and packages to design web sites, web apps, Mobile apps and real time software projects.	• Gather software requirement specifications and prepare design for real time problems
I6ME3	Cloud Computing	Global	This course facilitates the students to understand, analyse the various applications of cloud tool and also provide solutions for cloud security and storage.	 Understand fundamental concepts of cloud service and deployment models. Identify the importance of virtualization along with their technologies. Analyse different cloud computing Services. Analyse the components and the security in cloud. Illustrate different design & develop backup strategies for cloud data based



Year

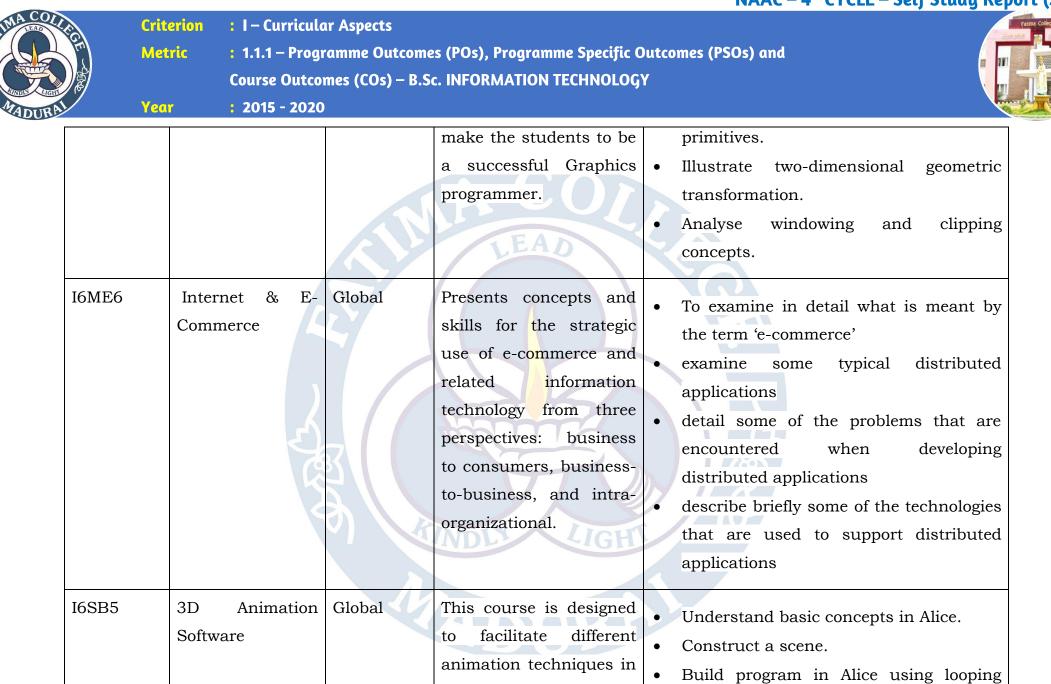
Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



					on features.
I6ME4	Mobile Computing	Global	This course gives the ability to acquire the knowledge about the technologies in mobile computing and its security issues.	· · ·	Understand the infrastructure to develop mobile communication systems. Identify the characteristics of different multiple access techniques in mobile communication. Analyse the measures GSM systems and the entire protocol architecture of GSM. Understand the GPRS technologies and architecture for communication using Mobile Devices. Illustrate the Security issues in Mobile Computing.
I6ME5	Computer Graphics	Global	This course is designed to facilitate to understand, design and implementation of pictorial data and will	•	Understand the need and concepts of computer graphics. Describe the procedure for points, lines and Circle. Analyse various attributes of output





Year

: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Softwareand edge refinement to isolate and edit parts of an image. Manipulate layers through ordering, positioning, scaling, rotation, and adjustments. CreateAdverts, Broachers, CL Designing Event and Designs, Pop Ups Touc Colour corrections Pa Converting B/W photo	rs in alike. ions. r web pages, Paper
composite images that demonstrate advanced selection and layering techniques.	and Exhibition stall ouch Ups Paintings, Drawings



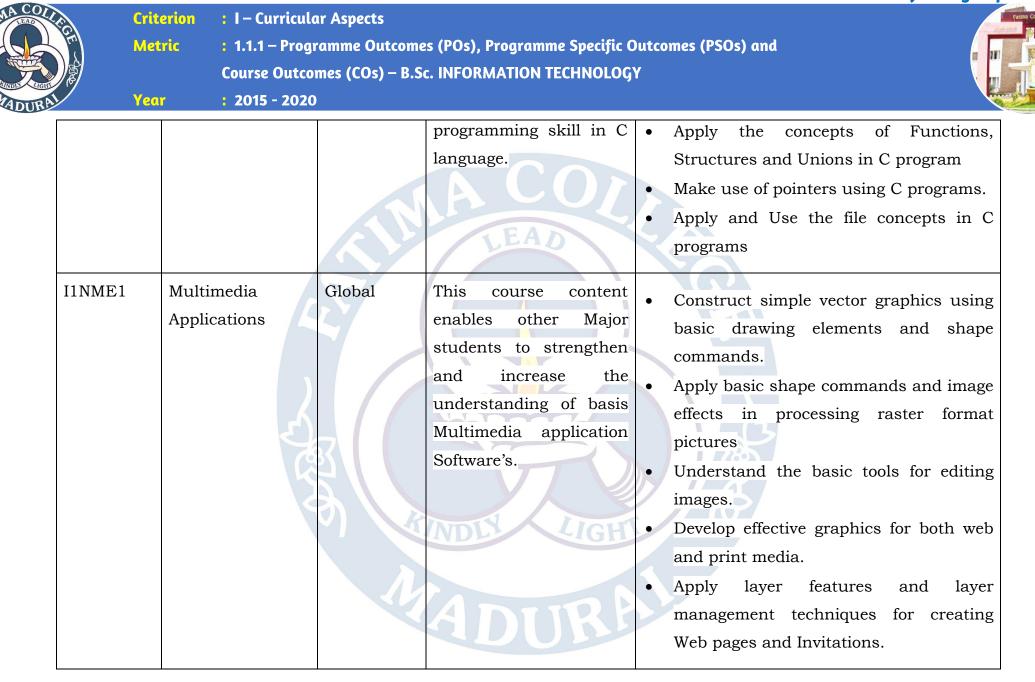
Criterion : I – Curricular Aspects

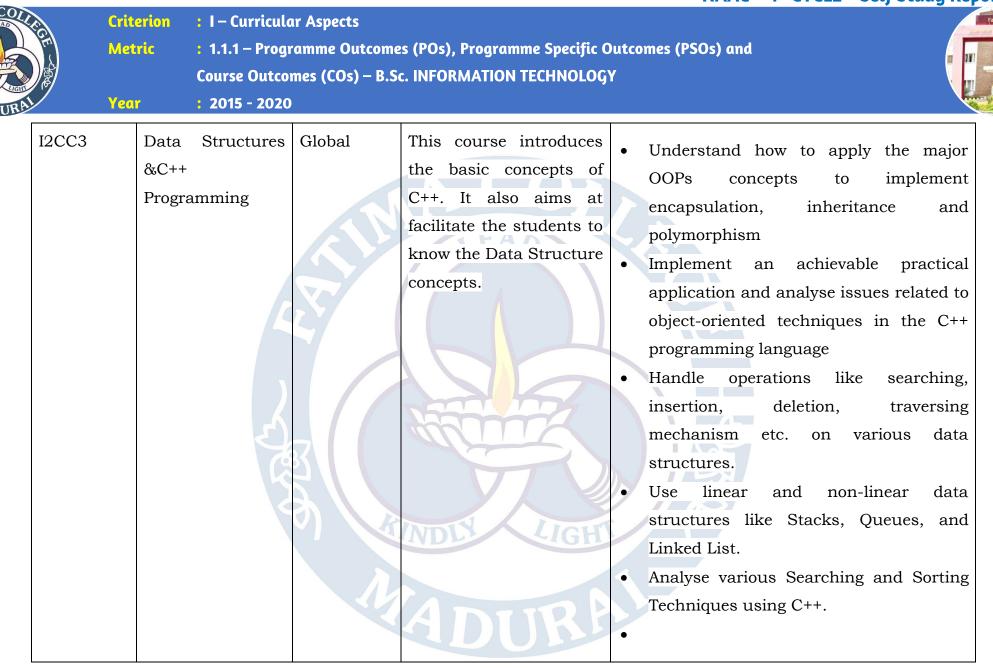
Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



2017 - 2018

Course Code	COURSE TITLE	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
IICC1	Computer Fundamentals & C Programming	Global	This course content plays a vital role in building the basic concepts in computers and the fundamental knowledge in programming	 Understand the basic concepts in Computer & C Programming. Identify and Apply different construct available for iteration such as 'for', 'while' and 'do-while'. Understand various storage concepts. Develop C programs using functions. Summarize the concepts of Pointers and Files.
I1CC2	C Programming Lab	Global	This course content plays a vital role in building the basic	Know the concept of Problem solving.Implement various concepts in C



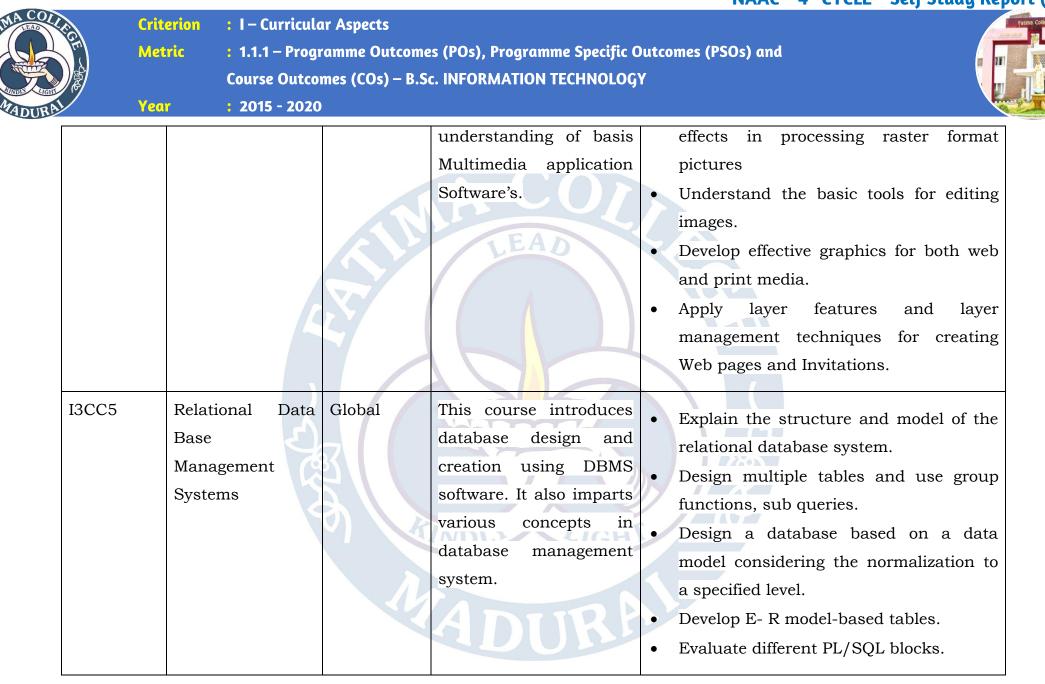




Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



I2CC4	Lab II - C++ Lab	Global	This course enables students to identify, formulate all techniques of software development in the C++ Programming Language and demonstrate these techniques.	•	Implement an achievable practical application on object-oriented techniques in the C++ programming language Implement linear and non-linear data structures like Stacks, Queues, linked list. Demonstrate the concept of classes and their types by using C++ objects. Apply the concept of polymorphism and inheritance in C++ Implement practical applications by applying Searching and Sorting Techniques using C++
I2NME2	Multimedia Applications	Global	This course content enables other Major students to strengthen and increase the	•	Construct simple vector graphics using basic drawing elements and shape commands. Apply basic shape commands and image

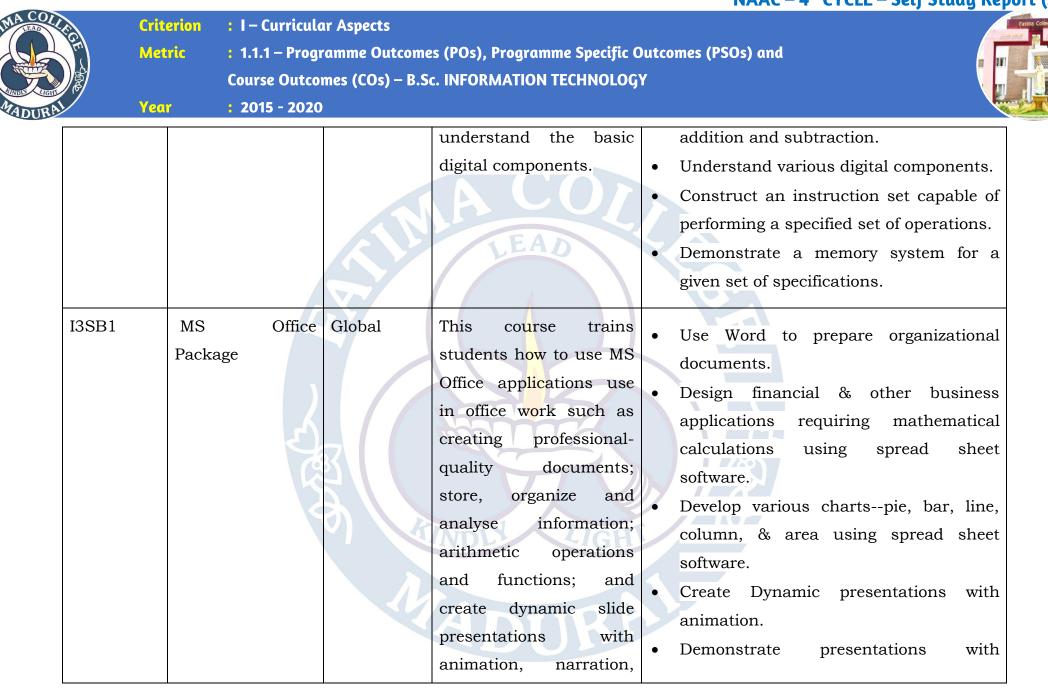




Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



I3CC6	Lab IV - RDBMS Lab	6 Global	This course gives hands on experience in relational database management system.	 Explain Various SQL Commands. Write SQL queries to user specifications Design database schema considering normalization and relationships within database. Develop PL/SQL Programs. Develop triggers, procedures and Cursors.
I3CC7	Trends in Information Technology	n Global	Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.	 Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. Communicate effectively in a variety of professional contexts
I3AC3	Digital Principle and Compute Architecture		This course content plays a vital role in making the students to	 Explain about digital logic circuits. Compute simple arithmetic operations for fixed-point and floating-point





Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



AI	Year : 2015 - 2020)		
I4CC8	Programming in Java		images, and much more, digitally and effectively. This course enables the students to build object- oriented java programs using the concept of abstraction, encapsulation, exception handling, packages, interfaces, threads and	 Understand the concepts of Object- Oriented Programming & Java Programming Constructs. Understand basic concepts of Java such as operators, classes, objects, inheritance, packages, Enumeration and
			AWT controls. It also imparts the ability to develop projects in java with JDBC connectivity.	 handling and Input/output operations. Design Java & Java applet-based applications. Analyse& Design the concept of Event Handling and Abstract Window Toolkit.
I4CC9	Lab IV - Java Lab	Global	This course gives hands on experience, practices the concepts of java	• Implement Object Oriented programming concept using operators and control Structures.

Metric Yeor		es (POs), Programme Specific Ou Sc. INFORMATION TECHNOLOGY	
I4CC10 Op	erating ems	important computersystem resources andthe functions.2. To study the process	 Design java programs using inheritance, interfaces and packages. Implement exception handling mechanism and multithreading concept. Design Java applet-based applications. Design applications to Handle Events using AWT components. Describe the evolution, types, structure and Understand the process management policies and scheduling of processes by CPU Evaluate the requirement for process synchronization and coordination handled by operating system Describe and analyze the memory management and its allocation policies. Identify use and evaluate the storage management policies with respect to



 Criterion
 : I - Curricular Aspects

 Metric
 : 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and

 Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY

 Verse
 : 2015 - 2020



Year	: 2015 - 2020	
		understand various different storage management
		issues in Inter Process technologies.
		Communication (IPC) • Identify the need to create the special
		and the role of OS in purpose operating system.
		IPC. LEAD
		4. To understand the
		concepts and
		implementation Memory
		management policies
		and virtual memory.
	5	5. To understand the
	63	working of an OS as a
	5	resource manager, file
		system manager,
		process manager,
		memory manager and
		I/O manager and
		methods used to
		implement the different



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



			parts of OS	
I4AC4	Enterprise Resource Planning	Global	This Course provide a contemporary and forward-looking on the theory and practice of Enterprise Resource Planning Technology to focus on a strong emphasis upon practice of theory in Applications and Practical oriented approach	 Analyse the strategic options for ERP identification and adoption. Design the ERP implementation strategies.
I4SB2	Quantitative Aptitude	Global	This course content plays a vital role for clearing any competitive exam and it covers all the Quantitative Aptitude topics and an	 Apply general mathematical techniques. Develop their critical thinking. Recall the formulas.



Year

2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



			in-depth understanding	
			of this subject.	
I5CC11	Web Technology	Global	To acquire knowledge and skills for creation of web site considering both client and server- side Students will able to implement interactive web page(s) using HTML, CSS and JavaScript. Able to design a responsive web site using HTML and CSS. To gain ability to develop responsive web applications. To explore different web extensions and web services standards	 Implement interactive web page(s) using HTML, CSS and JavaScript. Design a responsive web site using HTML5 and CSS To gain ability to develop responsive web applications. To explore different web extensions and web services standards To be familiarized with PHP web framework



Vec

Criterion : I – Curricular Aspects Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY : 2015 - 2020



	Year	2015 - 2020			
I5CC12	Web Lab	Technology	Global	This course is designed to enable the students to: 1. Understand the web technologies to create adaptive web pages for web application. 2. Use CSS to implement a variety of presentation effects to the web application 3. know the concept and implementation of cookies as well as related privacy concerns 4. Develop a sophisticated web application	 Integrate frontend and backend web technologies in distributed systems. Facilitate interface between frontend and backend of a web application
I5CC13	Data Comr	nunication	Global	This course is to provideinformationabout	• Describe the components of a data



Year

2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



	and Networking		various	data		communications system
			communicatio	on	•	Identify key considerations in selecting
			techniques	like		various switching techniques and
			switching	and		various transmission media in networks
			networking	concepts	Y	Describe the various types of Protocols
			which inclu	des layers		in Network layer and their features
			and their con	rresponding	•	Illustrates the functionality of transport
			protocols.			layer and their corresponding protocols.
					•	Analyse different usage of application
						layer protocols
I5CC14	Data Mining	Global	This course	introduces	•	Identify data mining tools and
	Concepts	5	the basic	concepts,		techniques in building intelligent
			principles,	methods,	ク	machines.
			implementatio	on	•	Understand different pre-processing
			techniques,	and		techniques.
			applications	of data		Analyse various data mining algorithms
			mining.	TRP		while applying in real time applications.
					•	Compare various supervised and

	Criterion Metric							
I5CC15	Year Soft Engin	* 2015 - 2020 ware heering	Global	This course introduces the basic steps involved in Software Development Life Cycle (SDLC).	•	unsupervised learning techniques is data mining. Illustrate the mining techniques like association, classification and clustering. Understand how to plan a software project. Analyse the cost estimate and problem complexity using various estimation techniques. Prepare the SRS, Design document Project plan of a given software system. Apply Software design and implementation ideas in S/W project development. Generate test cases using White Bot testing and Black Box testing.		
I5ME1	Infor	rmation	Global	This course provides a	•	Know the concepts of Storage and Da		

A TIMA



Criterion : I – Curricular Aspects

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



Year : 2015 - 2020

	Storage	And		comprehensive		structure Environment based on growth
	Management			understanding of the		and challenges in IT.
				various storage	•	Understand data protection by using
				infrastructure		related and recent techniques.
				components in classic	·	Identify the parameters of managing and
				and virtual		monitoring the storage infrastructure
		P		environments. It enables		and manage the solutions.
				the students to make	•	Know backup and archival data in both
				informed decisions in an		classic and virtualized environment.
				increasingly complex IT	•	Analyse, Monitoring and managing the
				environment.		storage infrastructure in cloud
		X	R			environments.
I5ME2	Multimedia		Global	To understand the		It contributes to having students
	Technologies			characteristics of		practice their communication skills and
				different media;		demonstration ability with project
			\mathbf{N}	understand the		presentation.
				representations of		It contributes to forming the global
				different multimedia		outlook that can affect the way
				data; understand		

			NAAC – 4 th CYCLE -	 Self Study Rep
NO.	Criterion Metric	: I – Curricular Aspects	tcomes (POs), Programme Specific Outcomes (PSOs) and	-
	Metric		- B.Sc. INFORMATION TECHNOLOGY	n 11
	Year	: 2015 - 2020	different data formats; be able to take into considerations in multimedia system 	to developing sing through
I5SB3	Coral	Draw Global	 This course introduces the concepts and tools for design, create and manipulate images for integration in publication layout and web output by using the software tool. Construct simple vector using basic drawing element commands. Apply basic shape command effects in processing pictures Design and edit images editing tool. Apply layer features for c for web and print. Develop effective graphics and print media. 	ents and shape ands and image raster format using image- reating images

ALLA C



Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



I5SB4	2D Animation Flash	Global	At the end of the course the student will learn basic concepts of 2D Animation, Storyboarding and create animated digital multimedia content for media using the tools and techniques as available in the Adobe Flash software	 Utilize several Flash toolsandtacticslearnedthroughoutthecourrsetoproduceaninteractiveflashbasedwebsite. Demonstrate the ability to effectively utilize the timeline and motion tween affects to produce animation
I6CC16	.Net Programming	Global	To describe the concepts of logic preparation; to recognize and explain the benefits of procedural, event driven, and object- oriented languages.	 To explain the basics of GUI design work with Visual Basic Forms, ToolBox controls and Properties; To be able to design and create Windows programs using the Visual Basic .NET programming language; To design and program using classes a



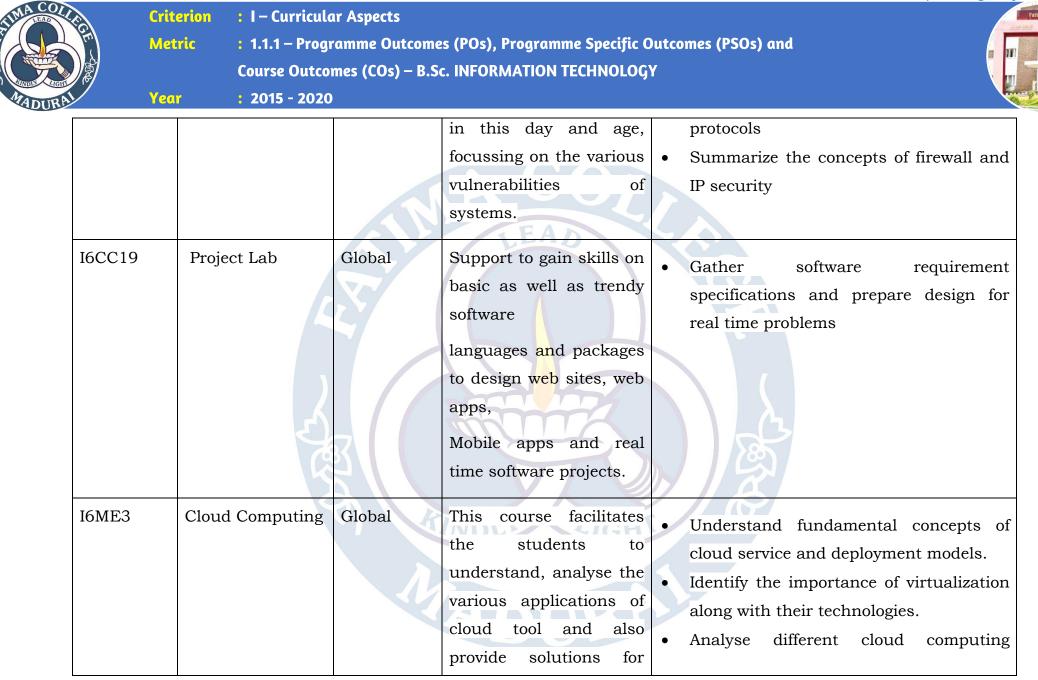
Year

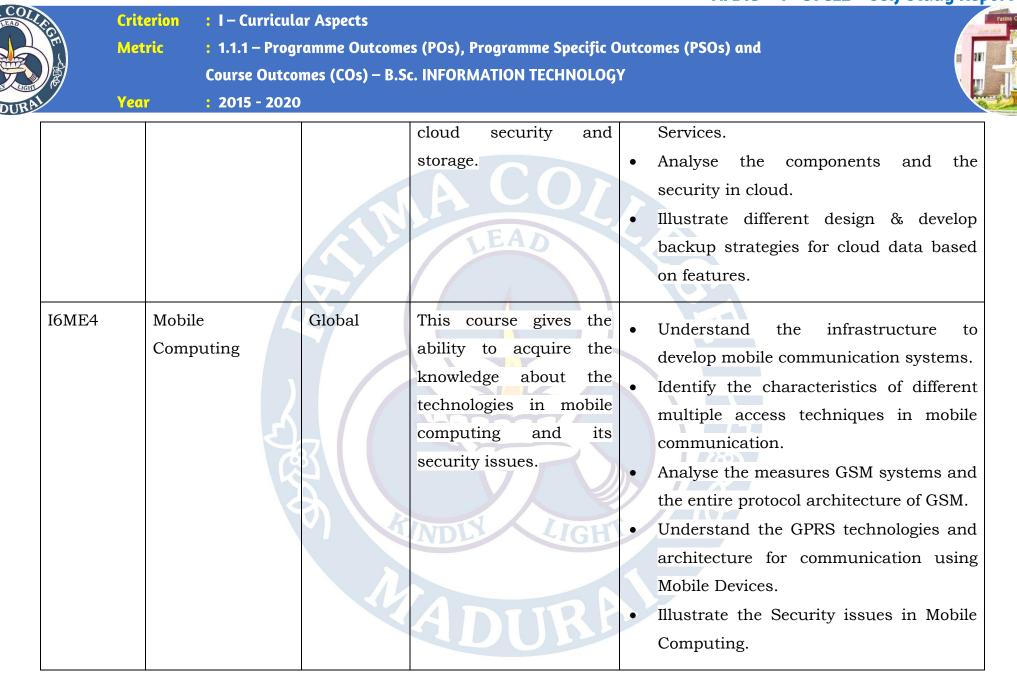
: 2015 - 2020

Criterion: I - Curricular AspectsMetric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				completely documented Visual Basic .NET project
I6CC17	.Net Programming Lab	Global	This course covers the concepts touser for developing interactive web pages using ASP.Net. Able to performing Database operations for Windows Form and web applications	 Create user interactive web pages using ASP.Net. Create simple data binding applications using ADO.Net connectivity. Performing Database operations for Windows Form and web applications.
I6CC18	Information Security	Global	The course covers the basics of the science of encryption and network security technology. It also provides the knowledge about the various risks that networks are faced with	 Understands the basic concepts of security Analyse various cryptographic algorithms while applying practically. Identify Asymmetric based cryptographic algorithms Compares different internet security



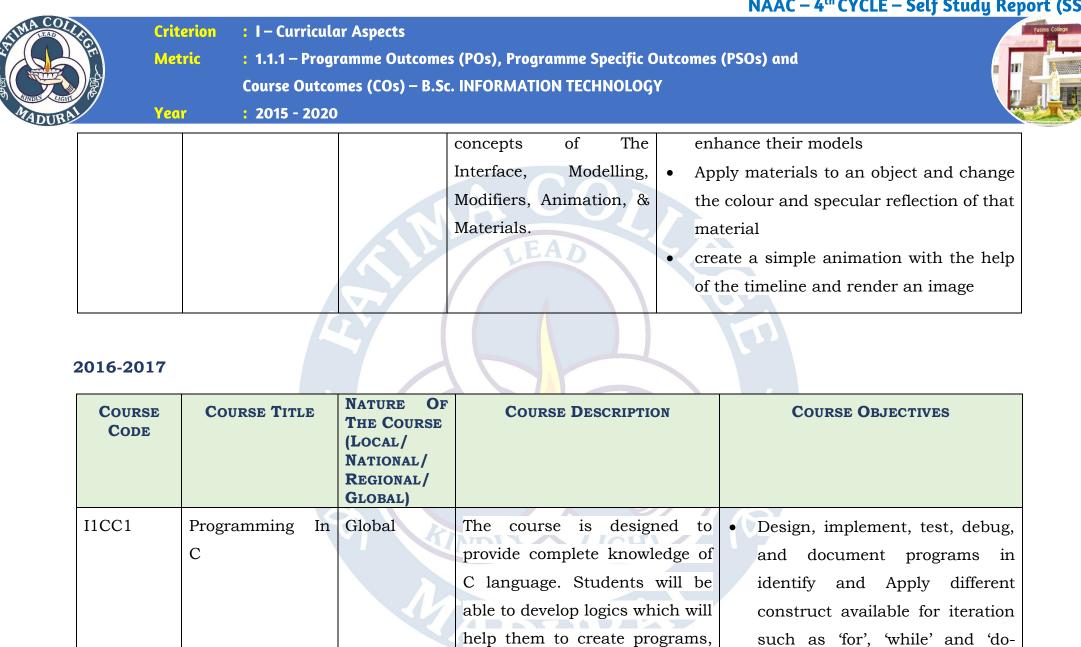


CE CE	Criterion Metric Year	: 1.1. Cours	1 – Prog	mes (COs) – B.	es (POs), Programme Specific O Sc. INFORMATION TECHNOLOG		omes (PSOs) and
I6ME5	Digita Proce	al essing nputer	Image	Global	Describe and explain basic principles of digital image processing. Design and implement algorithms that perform basic image processing (e.g. noise removal and image enhancement). Design and implement algorithms for advanced image analysis (e.g. image compression, image segmentation). 4. Assess the performance of image processing algorithms and systems.		Analyze general terminology of digital image processing. Examine various types of images intensity transformations and spatial filtering. Develop Fourier transform for image processing in frequency domain. 4 Evaluate the methodologies for image segmentation, restoration etc. Implement image process and analysis algorithms. Apply image processing algorithms in practical applications.
I6ME6	Interr Comr	net 8 merce	& E-	Global	Presents concepts and skills for the strategic	•	To examine in detail what is meant b the term 'e-commerce'

AMINA

RIGE .	Criterion Metric	: I – Curricular Aspects : 1.1.1 – Programme Outco	omes (POs), Programme Specific Outcomes (PSOs) and
	Year	Course Outcomes (COs) – E : 2015 - 2020	B.Sc. INFORMATION TECHNOLOGY
			use of e-commerce and related information technology from three perspectives: business to consumers, business- to-business, and intra- organizational.• examine some typical distributed applications• detail some of the problems that are encountered when developing distributed applications• detail some of the problems that are
I6SB5	3D	oduction To Global Animation e Green Foot	 This course is designed to facilitate different animation techniques in animation software Understand basic concepts in Alice. Construct a scene. Build program in Alice using looping and branching. Apply event handlers in alike. Develop 3D animations.
I6SB6	Intro 3D Blene	oduction To Global Animation- der	This course will focus on all of the core aspects of the software and to know about theCreate models with basic skills Use the blender interface Use the most common modifiers to

APTIN C



applications in C. Also by

while'.





	Γ	1			
			learning the basic	•	Understand various storage
			programming constructs they		concepts.
			can easily switch over to any	•	Understand how to write and
			other language in future.		use functions, how the stack is
			LEAD		used to implement function
					calls, and parameter passing
					options
				•	Develop C programs using files
I1CC2	C Lab	Global	The course is designed to	•	Design, implement, test, debug,
			provide complete knowledge of		and document programs in
	(3)		C language. Students will be		identify and Apply different
	C	34	able to develop logics which will		construct available for iteration
			help them to create programs,		such as 'for', 'while' and 'do-
			applications in C. Also by		while'.
			learning the basic	•	Understand various storage
			programming constructs they		concepts.
			can easily switch over to any	•	Understand how to write and
			other language in future.		use functions, how the stack is
					used to implement function



Year

2015 - 2020



					calls, and parameter passing options
			A CU/A	•	Develop C programs using files
I1NME1	Multimedia	Global	This course content enables	•	Construct simple vector
	Applications		other Major students to		graphics using basic drawing
			strengthen and increase the	5	elements and shape commands.
			understanding of basis	•	Apply basic shape commands
			Multimedia application		and image effects in processing
			Software's.		raster format pictures
				•	Understand the basic tools for
	E,				editing images.
	G	క		•	Develop effective graphics for
					both web and print media.
			NDLY LIGHT		Apply layer features and layer
					management techniques for
					creating Web pages and
		Y	ADIRB		Invitations.
I2CC3	Object Oriented	Global	This course provides in-depth	•	Perform object-oriented



Year

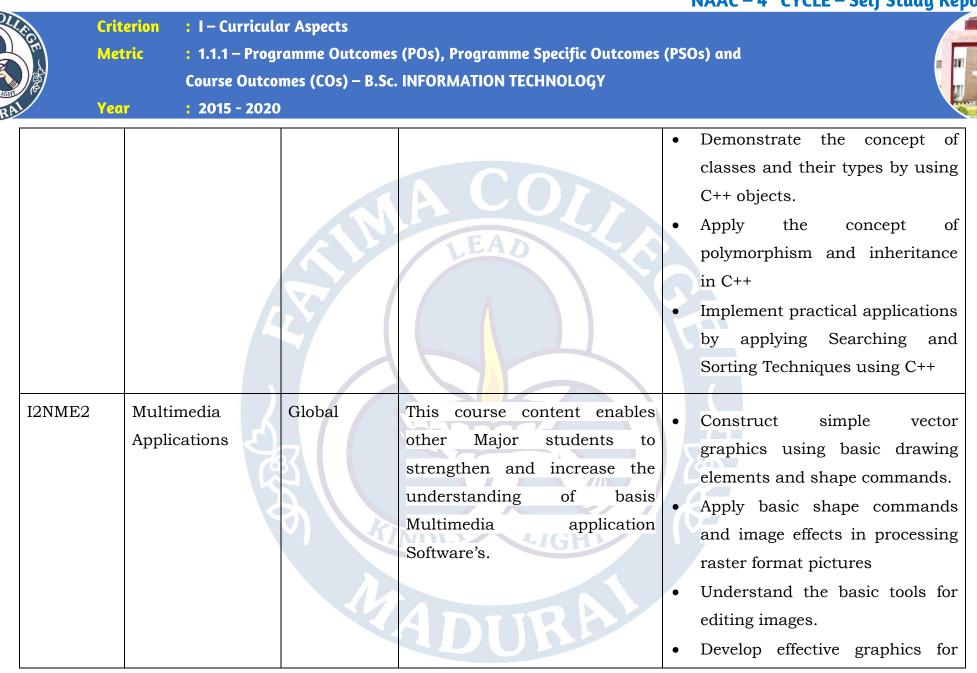
Criterion : I – Curricular Aspects

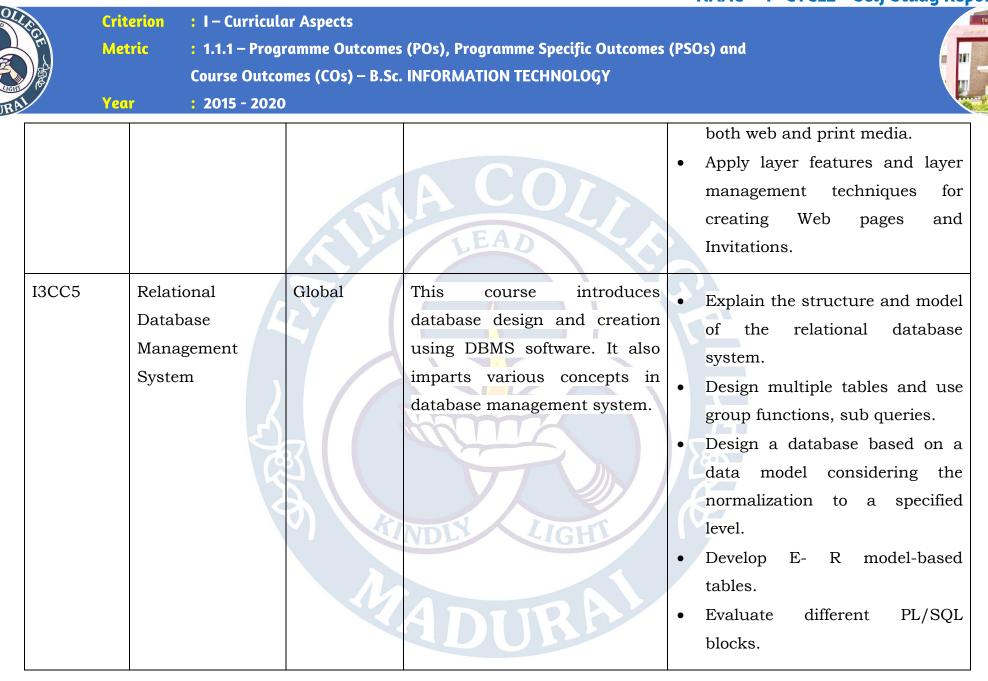
: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



	Programming in C++		coverage of object-oriented programming principles and techniques using C++ which include classes, overloading, data abstraction, information hiding, encapsulation, inheritance, polymorphism, file processing concepts.	programmingtosolutionstodemonstratingusagestructures,modularityotherstandardconstructs.Demonstrateadeptobject-orientedprogradingdevelopingsolutionsdemonstratingusageabstraction,encapsulainheritance.	r, I/O. and language ness of amming in problems of data
I2CC4	C++ Lab	Global	This course enables students to identify, formulate all techniques of software development in the C++ Programming Language and demonstrate these techniques.	 Implement an practical application oriented techniques in programming language Implement linear and data structures like Queues, linked list. 	n the C++ e non-linear







Year

: 2015 - 2020



I3CC6	RDBMS Lab	Global	This course gives hands on experience in relational database management system.	• Explain Various SQL
I3CC7	Trends Information Technology	In Global	Analyse a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.	• Design, implement, and evaluate a computing-based solution to meet a given set of computing

A COLLA	Criterion : I – Curricul	ir Aspects	NAAC – 4'''CYCLE – Self Stud	ratime Colle
ADURAL P		ramme Outcomes (POs), Programme S mes (COs) - B.Sc. INFORMATION TECH		
I3AC3	Digital Principles and Computer Architecture	Global This course convital role in students to un basic digital comp	 Explain about digital fraction Explain about digital fraction Explain about digital fraction Compute simple arithmore operations for fixed-point floating-point addition subtraction. 	and and igital set cified stem
I3SB1	Introduction to Visual Communication	Global To know about communication. acquire the a communication. and relate the	 To learn about the history evolution of Communication. Students understand Natur functions of Vi 	•



Year

2015 - 2020



Ka						
				visual communication. To gain		Students acquire knowledge on
				knowledge about the basic of		different types of perception &
				Visual Communication.		illusion.
I4CC8	Programming Java	in	Global	This course enables the students to build object- oriented java programs using the concept of abstraction, encapsulation ,exception handling, packages, interfaces, threads and AWT controls. It also imparts the ability to develop projects in java with JDBC connectivity.		Understand the concepts of Object-Oriented Programming & Java Programming Constructs. Understand basic concepts of Java such as operators, classes, objects, inheritance, packages, Enumeration and various keywords. Understand the concept of
				ADURA	•	exception handling and Input/output operations. Design Java & Java applet- based applications. Analyse& Design the concept of Event Handling and Abstract



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				Window Toolkit.
I4CC9	Java Lab	Global	This course gives hands on experience, practices the concepts of java programming language, and develops solutions for real world problems.	 Implement Object Oriented programming concept using operators and control Structures. Design java programs using inheritance, interfaces and packages. Implement exception handling mechanism and multithreading concept. Design Java applet-based applications. Design applications to Handle Events using AWT components.
I4CC10	Operating Systems	Global	To understand the main components of an OS & their Students will able to:	• Describe the evolution, types, structure and Understand the process management policies



Criterion

Year

: I – Curricular Aspects

2015 - 2020

Metric : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY



Describe the important and scheduling of processes by 1. CPU computer system resources and the functions. Evaluate the requirement for synchronization process and To study the process 2. coordination handled by management and scheduling.3. operating system To understand various issues Describe and analyze the Inter Process in memory management and its Communication (IPC) and the allocation policies. role of OS in IPC. • Identify use and evaluate the 4. To understand the concepts storage management policies and implementation Memory with respect to different storage management policies and management technologies. virtual memory. Identify the need to create the 5. To understand the working special purpose operating of an OS as a resource system. manager, file system manager, process manager, memory manager and I/O manager and methods used to implement the



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



			different parts of OS	
I4AC4	Data Structures	Global	This course enables the students to know the fundamental concept of data structures and to emphasize the importance of data structures in developing and implementing efficient algorithms.	 To define basic static and dynamic data structures and relevant standard algorithms Explain stack, queue, dynamically linked lists, trees, graphs, heap, priority queue, hash tables, sorting algorithms, min-max algorithm.
I4SB2	Introduction to Advertisement	Global	To Develop an advertising plan and present and defend it persuasively.	 Identify and understand the various advertising media. Demonstrate an understanding of how an advertising agency operates.
I5CC11	Web Technology	Global	To acquire knowledge and skills for creation of web site considering both client and	 Implement interactive web page(s) using HTML, CSS and JavaScript.





	2015 - 2020				
			server-side Students will able	•	Design a responsive web site
			to implement interactive web		using HTML5 and CSS
			page(s) using HTML, CSS and	•	To gain ability to develop
			JavaScript. Able to design a		responsive web applications.
			responsive web site using	•	To explore different web
			HTML and CSS. To gain ability		extensions and web services
			to develop responsive web		standards
			applications. To explore	•	To be familiarized with PHP web
			different web extensions and		framework
			web servi <mark>ces</mark> standards		
I5CC12	Web Technology Lab	Global	This course is designed to enable the students to: 1. Understand the web technologies to create adaptive web pages for web application. 2. useCSS to implement a variety of presentation effects to the web application 3. know the concept and	•	Integrate frontend and backend web technologies in distributed systems. Facilitate interface between frontend and backend of a web application



 Criterion
 : I – Curricular Aspects

 Metric
 : 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY

 Year
 : 2015 - 2020



RD						
				implementation of cookies as		
				well as related privacy concerns		
				4. Develop a sophisticated web		
			N	application		
	I5CC13	Data Communication And Networking	Global	This course is to provide information about various data communication techniques like switching and networking concepts which includes layers and their corresponding protocols.	•	Describe the components of a data communications system Identify key considerations in selecting various switching techniques and various transmission media in networks Describe the various types of Protocols in Network layer and their features Illustrates the functionality of transport layer and their corresponding protocols. Analyse different usage of
						application layer protocols



Year

: 2015 - 2020



I5CC14	Data Mining and Data Warehousing	Global	To study the methodology of engineering legacy databases for data ware housing and data mining to derive business rules for decision support systems. To analyze the data, identify the problems, and choose the relevant models and algorithms to apply	and implement classical algorithms in data mining and data warehousing; students will be able to assess the strengths and weaknesses of the algorithms identify
I5CC15	Software Engineering	Global	This course introduces the basic steps involved in Software Development Life Cycle (SDLC).	 analysis. Understand how to plan a software project. Analyse the cost estimate and





					problem complexity using
					various estimation techniques.
				•	Prepare the SRS, Design
					document, Project plan of a
			LEAD		given software system.
				•	Apply Software design and
					implementation ideas in S/W
					project development.
				•	Generate test cases using White
					Box testing and Black Box
	5				testing.
I5ME1	Digital Image	Global	This course is designed to		Understand the need and
	Processing &		facilitate to understand, design		concepts of computer graphics.
	Computer		and implementation of pictorial		Describe the procedure for
	Graphics		data and will make the		points, lines and Circle.
			students to be a successful		Analyse various attributes of
			Graphics programmer.	-	output primitives.
			JUBB	•	Illustrate two-dimensional



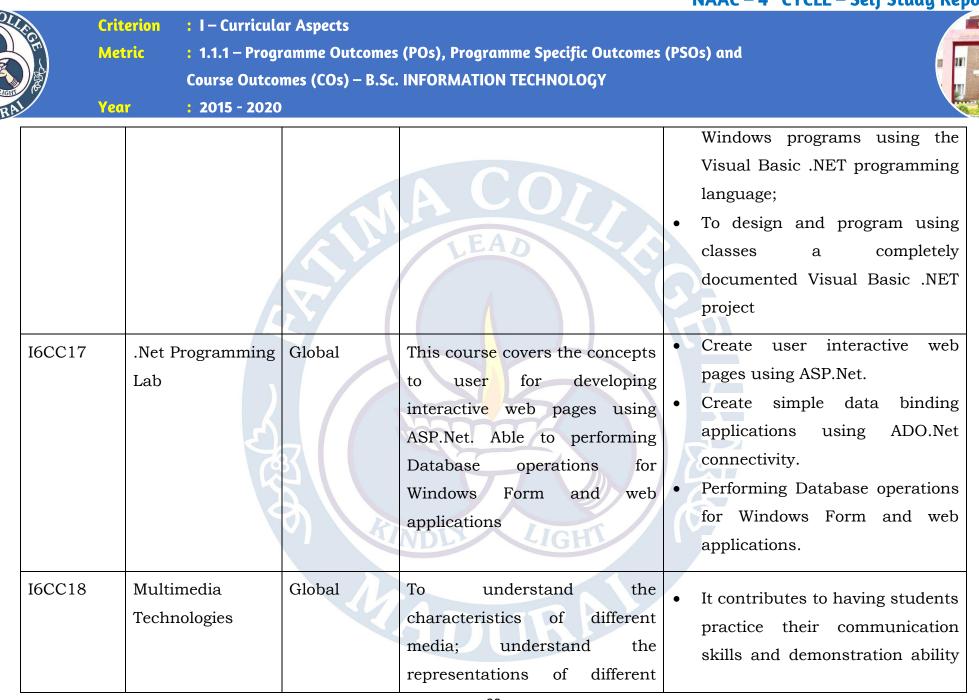


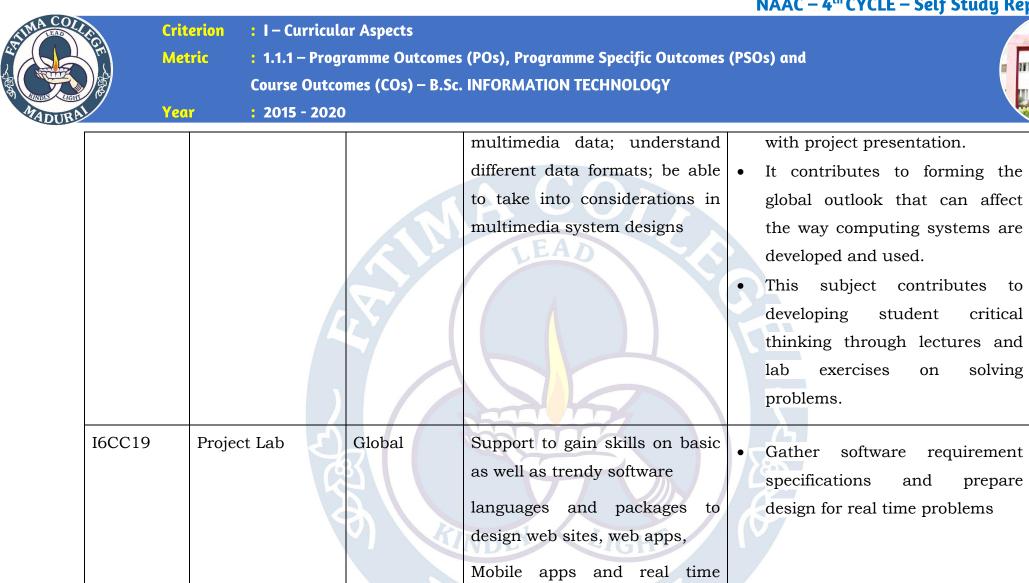
Ye	ar : 2015 -	2020		
IEMEO	Information	Clabal		 geometric transformation. Analyse windowing and clipping concepts.
I5ME2	Information Security	Global	To understand the characteristics of different media; understand the representations of different multimedia data; understand different data formats; be able to take into considerations in multimedia system designs	 It contributes to having students practice their communication skills and demonstration ability with project presentation. It contributes to forming the global outlook that can affect
I5SB3	Introduction Media	To Global	Covers the basics of planning, creating, using, and placing	• Demonstrate an understanding





5						
				advertising in the business		plays in the business world.
				world.	•	Demonstrate an understanding
						of advertising strategies and
				EAD		budgets.
	I5SB4	Introduction To 2D Animation Flash	Global	At the end of the course the student will learn basic concepts of 2D Animation, Storyboarding and create animated digital multimedia content for media using the tools and techniques as available in the Adobe Flash software		Utilize several Flash tools and staticslearnedthroughoutthecou rsetoproduceaninteractiveflash- basedwebsite. Demonstrate the ability to effectively utilize the timeline and motion tween affects to produce animation
	I6CC16	.Net Programming	Global	To describe the concepts of logic preparation; to recognize and explain the benefits of procedural, event driven, and object-oriented languages.	•	To explain the basics of GUI design work with Visual Basic Forms, Toolbox controls and Properties; To be able to design and create





course facilitates

to

the

understand,

•

Understand

fundamental

software projects.

This

students

I6ME3

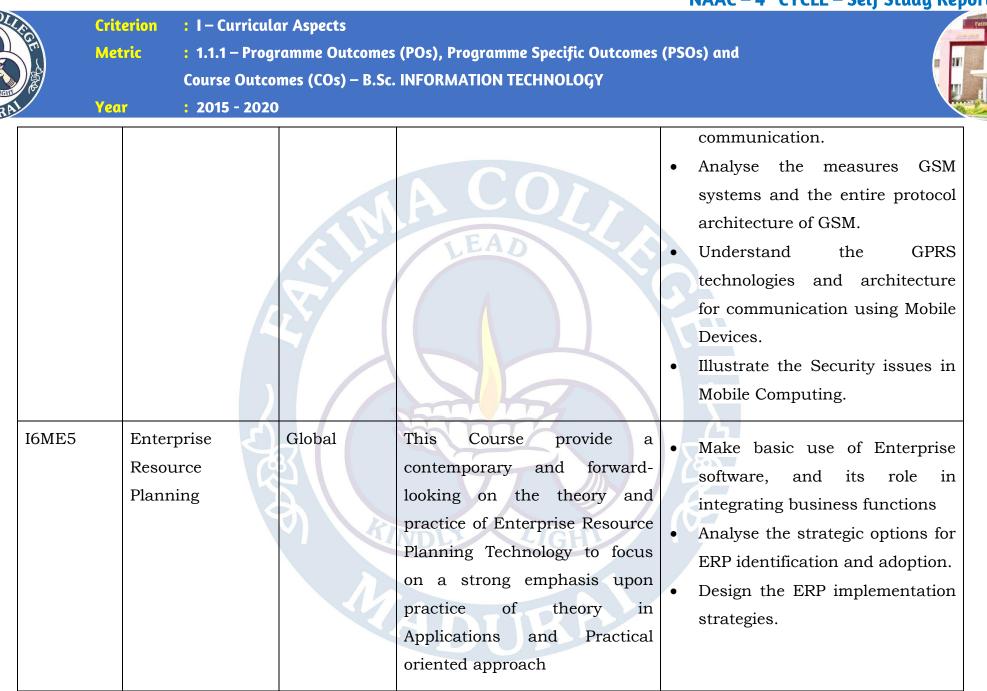
Cloud Computing

Global





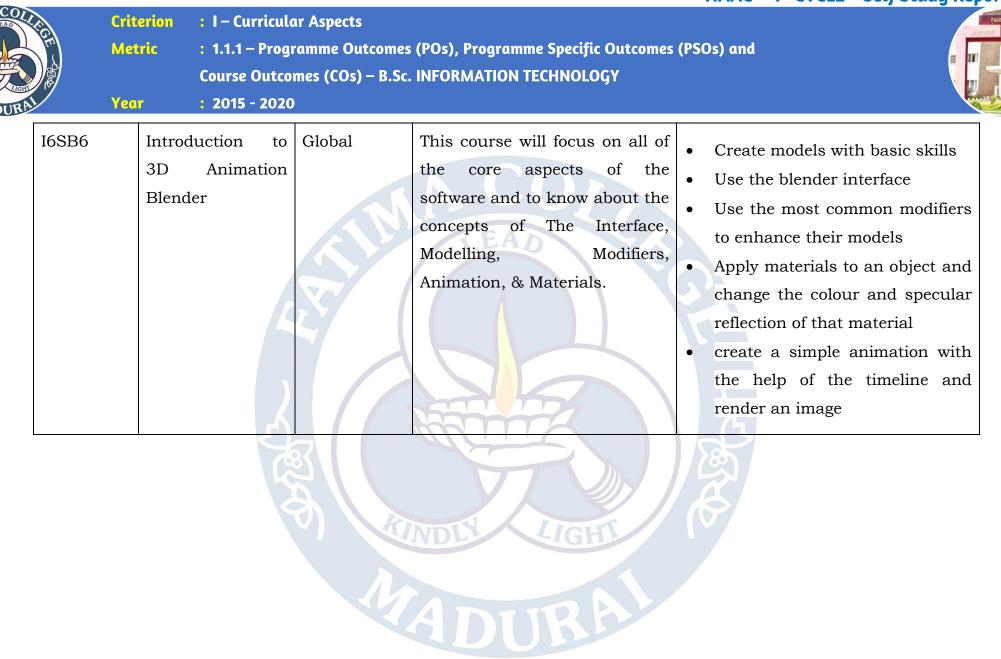
			analyse applications also provide security and	solutions storage.			concepts of cloud service and deployment models. Identify the importance of virtualization along with their technologies. Analyse different cloud
				R		•	computing Services. Analyse the components and the security in cloud. Illustrate different design & develop backup strategies for cloud data based on features.
I6ME4	Mobile Computing	Global	This course acquire the the techno computing issues.	knowled logies in	ge about n mobile		Understand the infrastructure to develop mobile communication systems. Identify the characteristics of different multiple access techniques in mobile







I6ME6	Internet & E- Commerce	Global	Presents concepts and skills for the strategic use of e-commerce and related information technology from three perspectives: business to consumers, business-to- business, and intra- organizational.	 To examine in detail what is meant by the term 'e-commerce' examine some typical distributed applications detail some of the problems that are encountered when developing distributed applications describe briefly some of the technologies that are used to support distributed applications
I6SB5	Introduction to 3D Animation Alice Green Foot	Global	This course is designed to facilitate different animation techniques in animation software	 Understand basic concepts in Alice. Construct a scene. Build program in Alice using looping and branching. Apply event handlers in alike. Develop 3D animations.





Criterion : I – Curricular Aspects

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGYYear: 2015 - 2020



2015-2016

Course Code	Course Title	NATURE OF THE COURSE (LOCAL/ NATIONAL/ REGIONAL/ GLOBAL)	COURSE DESCRIPTION	COURSE OBJECTIVES
IICC1	Programming In C	Global	The course is designed to provide complete knowledge of C language. Students will be able to develop logics which will help them to create programs, applications in C. Also by learning the basic programming constructs they can easily switch over to any other language in future.	 Design, implement, test, debug, and document programs in identify and Apply different construct available for iteration such as 'for', 'while' and 'do- while'. Understand various storage concepts. Understand how to write and use functions, how the stack is used to implement function calls, and parameter passing options Develop C programs using



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				Functions & Files concepts.
IICC2	C Lab	Global	To make the student learn a programming language.• To learn problem solving techniques. • To teach the student to write programs in C and to solve the problems	• After Completion of this course the student would be able to Read, understand and trace the execution of programs written in
I1CC3	Data Structures And Algorithms	Global	This course enables the students to know the	• To define basic static and





Kn						
				fundamental concept of data		relevant standard algorithms
				structures and to emphasize	•	Explain stack, queue,
				the importance of data		dynamically linked lists, trees,
				structures in developing and		graphs, heap, priority queue,
				implementing efficient		hash tables, sorting algorithms,
				algorithms.	5	min-max algorithm.
Ι	1AC1	Digital Principles And Computer	Global	This course content plays a vital role in making the	•	Explain about digital logic
		Architecture		students to understand the		circuits.
		Architecture		basic digital components.	•	Compute simple arithmetic
				basic digital components.		operations for fixed-point and
						floating-point addition and
					Y L	subtraction.
					•	Understand various digital
				NDLY LIGHT		components.
					•	Construct an instruction set
						capable of performing a specified
				ADTIR		set of operations.
					•	Demonstrate a memory system



Year

Criterion : I - Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) andCourse Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				for a given set of specifications.
I1NME1	Multimedia Applications	Global	This course content enables other Major students to strengthen and increase the understanding of basis Multimedia application Software's.	 Construct simple vector graphics using basic drawing elements and shape commands. Apply basic shape commands and image effects in processing raster format pictures Understand the basic tools for editing images. Develop effective graphics for both web and print media. Apply layer features and layer management techniques for creating Web pages and Invitations.
I2CC4	Object Oriented Programming In C++	Global	This course provides in-depth coverage of object-oriented programming principles and	• Perform object-oriented programming to develop solutions to problems





I2CC5C++ LabGlobalThis course enables students to identify, formulate of software development in the C++Implement an achievable achievable programming languageImplement an achievable programming language							
data abstraction, information hiding, encapsulation, inheritance, polymorphism, file processing concepts.other standard language constructs.Demonstrate adeptness of object-oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance.Demonstrate adeptness of object-oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance.I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable practical application on object- oriented techniques in the C++				techniques using	C++ which		demonstrating usage of control
hiding,encapsulation,constructs.inheritance, polymorphism, file processing concepts.Demonstrate adeptness of object-oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance.I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable programming language				include classes,	overloading,		structures, modularity, I/O. and
Index				data abstraction,	information		other standard language
processing concepts.object-oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance.I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable practical application on object- oriented techniques in the C++				hiding, er	ncapsulation,		constructs.
I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable practical application on object- oriented techniques in the C++				inheritance, polym	orphism, file	•	Demonstrate adeptness of
I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable practical application on object- oriented techniques in the C++ programming language				processing concept	. s.		object-oriented programming in
I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable practical application on object- oriented techniques in the C++							developing solutions to problems
I2CC5C++ LabGlobalThis course enables students to identify, formulate all techniques of software development in the C++Implement an achievable practical application on object- oriented techniques in the C++							demonstrating usage of data
I2CC5 C++ Lab Global This course enables students to identify, formulate all techniques of software development in the C++ Implement an achievable practical application on object-oriented techniques in the C++							abstraction, encapsulation, and
identify,formulateallidentify,formulatealltechniquesofsoftwareoriented techniques in the C++developmentinthe C++programming language							inheritance.
identify,formulateallidentify,formulatealltechniquesofsoftwareoriented techniques in the C++developmentinthe C++programming language							
techniques of software development in the C++ programming language	I2CC5 C+	++ Lab	Global	This course enable	s students to	•	Implement an achievable
development in the C++ programming language		Contraction of the second seco		identify, form	ulate all		practical application on object-
programming language				techniques of	software		oriented techniques in the C++
				development in	the C++		programming language
Programming Language and • Demonstrate the concept of				Programming La	nguage and	•	Demonstrate the concept of
demonstrate these techniques. classes and their types by using				demonstrate these	techniques.		classes and their types by using
C++ objects.							
• Apply the concept of						•	Apply the concept of
polymorphism and inheritance						•	



Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				in C++
I2NME2	Multimedia Applications	Global	This course content enables other Major students to strengthen and increase the understanding of basis Multimedia application Software's.	 Construct simple vector graphics using basic drawing elements and shape commands. Apply basic shape commands and image effects in processing raster format pictures Understand the basic tools for editing images. Develop effective graphics for both web and print media. Apply layer features and layer management techniques for creating Web pages and Invitations.
I3CC6	Relational Database	Global	This course introduces database design and creation	• Explain the structure and model
	Management		using DBMS software. It also	of the relational database system.





	System		imparts	various	concepts	in	•	Design multiple tables and use
			database	manager	nent syster	m.		group functions, sub queries.
							•	Design a database based on a
								data model considering the
			LE	AD		\sim		normalization to a specified
								level.
							•	Develop E- R model-based
								tables.
							•	Evaluate different PL/SQL
								blocks.
I3CC7	RDBMS Lab	Global	This cou	rse give	s hands	on		Explain Various SQL
	C	<u>s</u>	experience	e in	relatio	nal		Commands.
			database	manager	nent syster	m.	•	Write SQL queries to user
			NDLY		GHT			specifications
							•	Design database schema
								considering normalization and
								relationships within database.
							•	Develop PL/SQL Programs.



Year

: 2015 - 2020



				• Develop triggers, procedures and Cursors.
I3SB1	Introduction to Advertisement	Global	To Develop an advertising plan and present and defend it persuasively.	 Identify and understand the various advertising media. Demonstrate an understanding of how an advertising agency operates.
I4CC8	Web Technology	Global	To acquire knowledge and skills for creation of web site considering both client and server-side Students will able to implement interactive web page(s) using HTML, CSS and JavaScript. Able to design a responsive web site using HTML and CSS. To gain ability to develop responsive web applications. To explore	 Design a responsive web site using HTML5 and CSS To gain ability to develop responsive web applications. To explore different web extensions and web services



Criterion : I – Curricular Aspects

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



: 2015 - 2020

Year

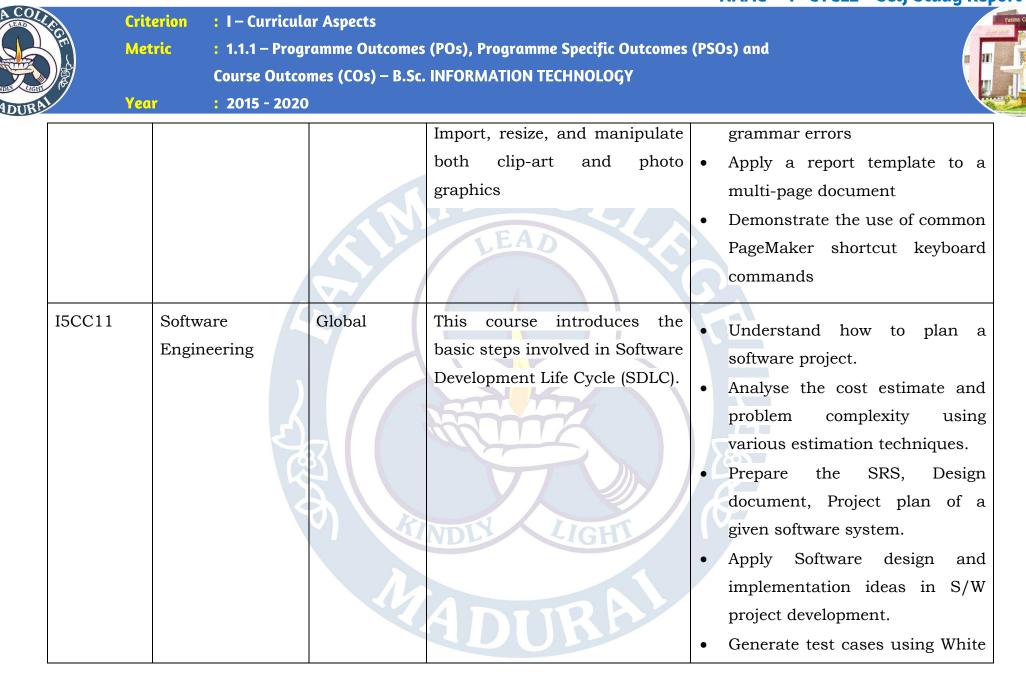
			different web extensions and web services standards	framework
I4CC9	Web Technology Lab	Global	This course is designed to enable the students to: 1. Understand the web technologies to create adaptive web pages for web application. 2. Use CSS to implement a variety of presentation effects to the web application 3. know the concept and implementation of cookies as well as related privacy concerns 4. Develop a sophisticated web application	 Integrate frontend and backend web technologies in distributed systems. Facilitate interface between frontend and backend of a web application
I4CC10	Operating Systems & Linux	Global	This course content plays a vital role in making the students to understand the	• Describe the evolution, types, structure and functions of operating systems.

ANI R	Metric Year	: 1.1.1 – Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) – B.Sc. INFORMATION TECHNOLOGY : 2015 - 2020				
				basic operating system concept and about Linux.	 Explain techniques involved in concurrency and deadlock. Describe memory management and processor scheduling used in operating systems. Implement disk scheduling algorithm for a given scenario. Execute Linux basic commands and shell scripts. 	
I4AC2	-	nizational	Global	To help the students to develop cognizance of the importance of human behaviour. To enable students to describe how people behave under different conditions and understand why people behave as they do. To provide the students to analyse specific strategic human resources demands for future	behaviour to understand the behaviour of people in the	





<i>y</i>	· 2013 ·	2020			
			action. To enable students to		organization.
			synthesize related information	•	Analyse the complexities
			and evaluate options for the		associated with management of
			most logical and optimal		the group behaviour in the
			solution such that they would		organization.
			be able to predict and control	•	Demonstrate how the
			human behaviour and improve		organizational behaviour can
			results.		integrate in understanding the
					motivation (why) behind
					behaviour of people in the
		5			organization.
I4SB2	Introduction	To Global	Design eye-catching flyers and		Select and import appropriate
	Pagemaker		ads		graphics for aesthetics and
			Demonstrate marketable		concept clarification
			desktop publishing skills	•	Create scan able pages by
			Use white space to create		careful arrangement of text and
			readable and attractive		graphics
			newsletters	•	Proofread document text,
					catching all spelling and
F		•	-		





Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				Box testing and Black Box testing.
I5CC12	Data Communication and Networking	Global	This course is to provide information about various data communication techniques like switching and networking concepts which includes layers and their corresponding protocols.	 Describe the components of a data communications system Identify key considerations in selecting various switching techniques and various transmission media in networks Describe the various types of Protocols in Network layer and their features Illustrates the functionality of transport layer and their corresponding protocols. Analyse different usage of application layer protocols
I5CC13	Data Mining and Data	Global	To study the methodology of engineering legacy databases	• Enable students to understand and implement classical

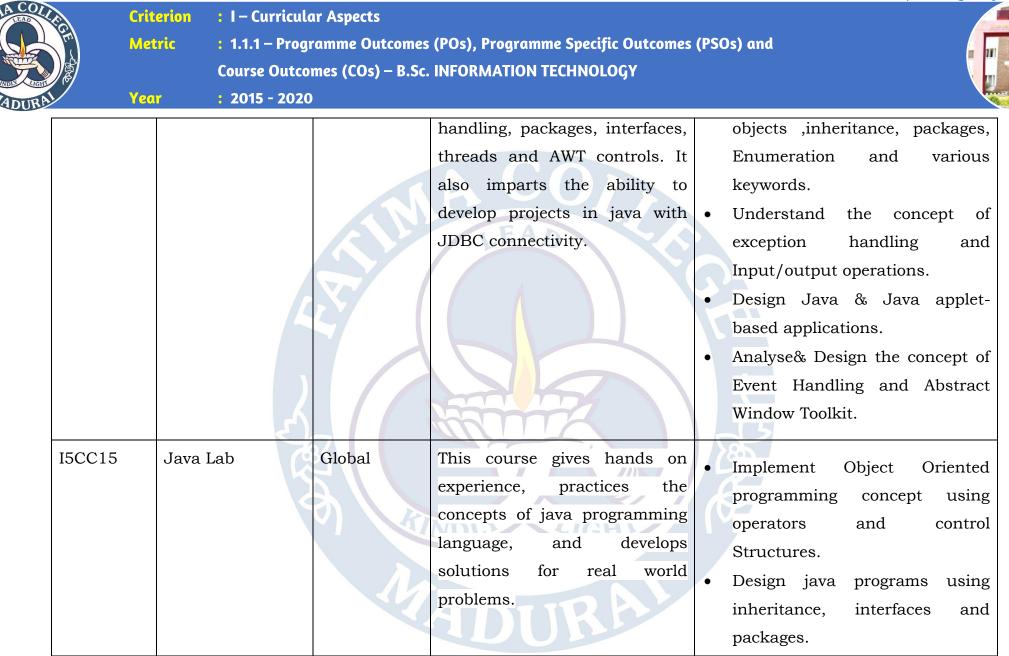


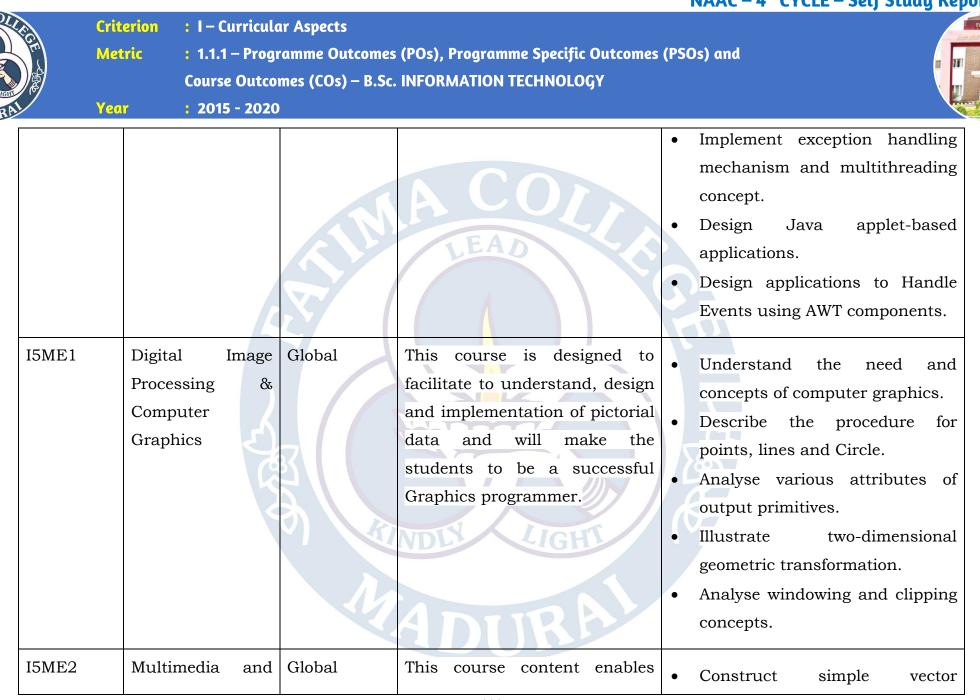
Year

: 2015 - 2020



	Warehousing		for data warehousing and data		algorithms in data mining and
			mining to derive business rules		data warehousing; students will
			for decision support systems.		be able to assess the strengths
			2. To analyze the data, identify		and weaknesses of the
			the problems, and choose the		algorithms, identify the
			relevant models and algorithms		application area of algorithms,
			to apply		and apply them
				•	Students would learn data
					mining techniques as well as
					methods in integrating and
					interpreting the data sets and
	S S				improving effectiveness,
	R R	2		V C	efficiency and quality for data
	<	3			analysis.
I5CC14	Programming in	Global	This course enables the		Understand the concepts of
	Java		students to build object-		Object-Oriented Programming &
			oriented java programs using		Java Programming Constructs.
			the concept of abstraction,		
			encapsulation ,exception	•	Understand basic concepts of
					Java such as operators, classes,







Year

2015 - 2020



		 1					
	Its Applications	other M	ajor	students	to		graphics using basic drawing
		strengthen	and	increase	e the		elements and shape commands.
		understan	ding	of	basis	٠	Apply basic shape commands
		Multimedia	a	applic	cation		and image effects in processing
		Software's.	AD				raster format pictures
						•	Understand the basic tools for
							editing images.
						•	Develop effective graphics for
							both web and print media.
					\sim	•	Apply layer features and layer
				2			management techniques for
	4						creating Web pages and
							Invitations.
		y					8
I5SB3	Introduction to	This cour		ntroduces		•	Construct simple vector
	Photoshop &	concepts a	and to	ols for de	esign,		graphics by using basic drawing
	Corel Draw	create and	l man	ipulate in	nages		elements and shape commands.
		for integra	ation	in public	cation	•	Apply basic shape commands
		layout and	web o	utput by	using		and image effects in processing
		the softwar	re tool				

na College

					NAAC – 4 th CYCLE – Self Study Repo
	Criterion Metric Year		ramme Outcome mes (COs) – B.S	es (POs), Programme Specific Outcomes c. INFORMATION TECHNOLOGY	e (PSOs) and
I5SB4		duction to		At the end of the course the student will learn basic concepts of 2D Animation, Storyboarding and create animated digital multimedia content for media using the tools and techniques as available in the Adobe Flash software	 basedwebsite. Demonstrate the ability to
I6CC16	Data Data	Mining and	Global	This course introduces the basic concepts, principles,	• Identify data mining tools and techniques in building

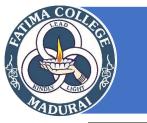
N





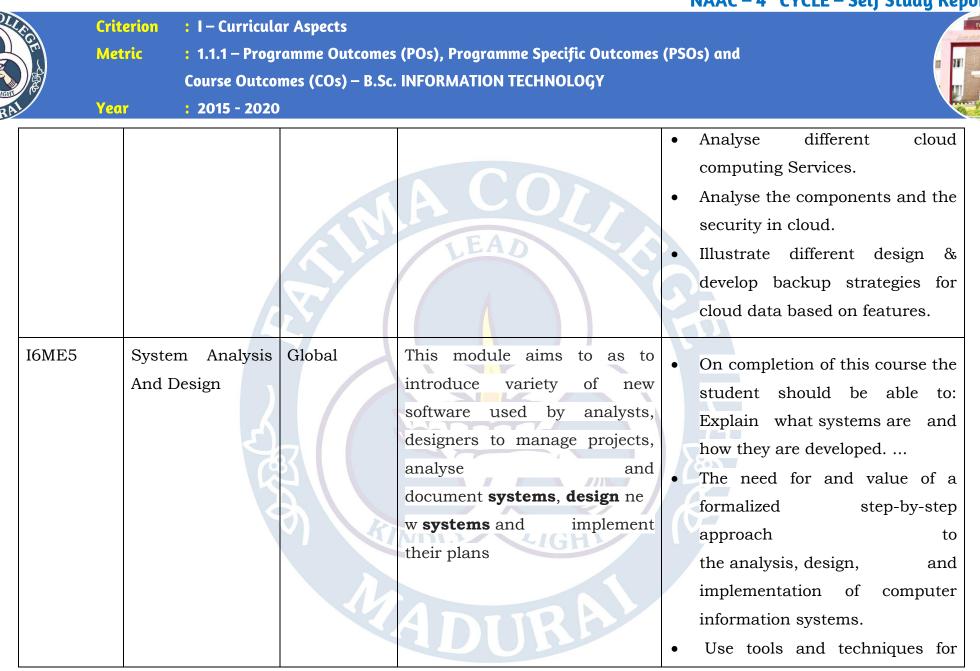
1.					
	Warehousing		methods, implement	ntation	intelligent machines.
			techniques, and applicati	ions of	• Understand different pre-
			data mining.		processing techniques.
					• Analyse various data mining
			LEAD		algorithms while applying in real
					time applications.
					• Compare various supervised and
					unsupervised learning
					techniques in data mining.
					• Illustrate the mining techniques
					like association, classification
		37			and clustering.
I6CC17	Information	Global	To understand	the	• It contributes to having students
	Security		characteristics of di	ifferent	practice their communication
			media; understand	the	skills and demonstration ability
			representations of di	ifferent	with project presentation.
			multimedia data; unde:	erstand	• It contributes to forming the
			different data formats; b	be able	global outlook that can affect
			to take into consideration	ons in	_

AI	Metric Year		comes (COs) – B.Sc	s (POs), Programme Specific Outcomes INFORMATION TECHNOLOGY	(PSOs) and
I6CC18	Projec	et Lab	Global	multimedia system designs	
I6ME3	Mobil Comp	e outing	Global	This course gives the ability to acquire the knowledge about the technologies in mobile computing and its security issues.	 Understand the infrastructure to develop mobile communication systems. Identify the characteristics of





					different multiple access
					techniques in mobile
					communication.
				•	Analyse the measures GSM
			LEAD		systems and the entire protocol
					architecture of GSM.
				•	Understand the GPRS
					technologies and architecture
					for communication using Mobile
					Devices.
	2			•	Illustrate the Security issues in
	$\mathbf{\zeta}$				Mobile Computing.
		2		<u>+</u> 1	
I6ME4	Cloud Computing	Global	This course facilitates the	•	Understand fundamental
			students to understand,		concepts of cloud service and
			analyse the various		deployment models.
			applications of cloud tool and	•	Identify the importance of
			also provide solutions for cloud		virtualization along with their
			security and storage.		technologies.





Year

Criterion : I – Curricular Aspects

: 2015 - 2020

Metric: 1.1.1 - Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and
Course Outcomes (COs) - B.Sc. INFORMATION TECHNOLOGY



				process and data modelling
I6ME6	TCP/IP	Global	Build an understanding of the fundamental concepts of computer networking. Familiarize the student with the basic taxonomy and terminology of the computer networking area. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking. Allow the student to gain expertise in some specific areas of networking such as the design and maintenance of individual networks.	• key features and functions of TCP and UDP. Use Wire shark to identify ICMP request and reply packets.

	Criterion : I – Cu	urricular Aspects		NAAC – 4 CYCLE – Self Study Report (S
	Course		nes (POs), Programme Specific Outcomes .Sc. INFORMATION TECHNOLOGY	(PSOs) and
I6SB5	Introduction 3Ds Max	To Global	 The primary objective of this course is to teach students the essentials of working 3D using an array of features. and tools. Getting Started. • Touring the 3ds Max Design User Interface. Animation. • Learning General Principles Rendering. • Creating and Positioning Camera 	 Use the Interface. Use Selection and Transformation Tools. Create and Modify Mesh Objects. Create and Modify Poly Objects. Import AutoCAD 2D Files and Model in Max. Organize AutoCAD Files Using Layers and Planes. Import Planes from AutoCAD Files to Create 3D Objects in Max.
I6SB6	Introduction Image J	To Global	After this course participants should be able to: Perform basic image handling, manipulation and visualisation	• Use the built-in leatures of the ImageJ software package to view process and calibrate

