SCHEME OF EXAMINATION

&

SYLLABUS

OF

MASTER OF BUSINESS ADMINISTRATION (MBA)

FOR

ACADEMIC SESSION 2017- 2018 ONWARDS

Entrepreneurship | Employability | Skill Development

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY
Dwarka, New Delhi - 110 078 (INDIA).
www.ipu.ac.in

1. Approved in the 43rd Academic Council meeting held on 25/05/2017 vide agenda item 43.13 w.e.f. 2017

2. Modified in the 46th meeting of the Academic Council held on 22/07/2019 vide Agenda Item 46.26(b).

PROGRAM OUTCOMES (POs)

PO1: Ability to understand, analyse and communicate global, economic, legal, and ethical aspects of business .

PO2: Analytical and critical thinking abilities for data-based decision making.

PO3: Application of knowledge of all the functional areas of business using integrated problem- solving skills and strategic analysis.

PO4: Develop abilities in relationship building, teamwork, and leadership.

PO5: Generate creative, innovative, and entrepreneurial solutions to business problems.

Criteria for Internal Assessment

The internal assessment of the students **(out of 25 marks)** shall be as per the criteria given below:

1. Class Test* - **15 marks**

(Will be a written test to be conducted on the date communicated by the University as per Academic Calendar for the Class Test, except for the Fourth Semester where the dates will be decided by the concerned institutes/school).

2. Individual Participation/Presentation/Viva-Voce/Group Discussion **10 marks**

*Record to be maintained by faculty and made available to the Examination Branch of the University, if required.

Note: *The Scheme and Syllabus is as per the Ordinance 11 of the University.*

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION (MBA)

FIRST SEMESTER

Code No.	Paper	L	T/P	Credits	Type of Course
MS 101	Management Process & Organizational Behaviour	4	-	4	Core
MS 103	Decision Sciences	4	-	4	Core
MS 105	Managerial Economics	4	-	4	Core
MS 107	Accounting for Management	4	-	4	Core
MS 109	Information Technology Management	3	-	3	Ability Enhancement Course
MS 111	Business Communication	4	-	4	Ability Enhancement Course
MS 113	Legal Aspects of Business	4	-	4	Core
MS 151	Information Technology Management Lab	-	2	1	Ability Enhancement Course
MS 115	Managerial Skills Development (NUES)*	2	-	2	Ability Enhancement Course
	Total	29	2	30	
Open Courses offered under CBCS Scheme by USMS					
MS 101	Management Process & Organizational Behaviour	4	-	4	
MS 111	Business Communication	4	-	4	
MS 115	Managerial Skills Development (NUES)*	2	-	2	

* NUES: NON UNIVERSITY EXAMINATION SYSTEM
**Choice Based Credit System

Note: Students of other University Schools of Studies can take a maximum of two open courses in one semester.

Industrial Visit:

There will be at least one Industrial Visit for the students in the 1st Year either in the First Semester or Second Semester. The students will be required to submit a report and present the same to their Industrial Visit In-Charge.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION (MBA)

SECOND SEMESTER

Code No.	Paper	L	T/P	Credits	Type of Course
MS 102	Management of Technology, Innovation and Change	4	-	4	Core & Inter Disciplinary
MS 104	Financial Management	4	-	4	Core
MS 106	Marketing Management	4	-	4	Core
MS 108	Business Research Methods	4	-	4	Core & Inter Disciplinary
MS 110	Operations Management	4	-	4	Core
MS 112	Human Resource Management	4	-	4	Core
MS 114	E-Business	4	-	4	Core & Inter Disciplinary
MS 116	Business Analytics (NUES) *	2		2	Ability Enhancement Course
	Total	30	-	30	
Open Courses offered under CBCS Scheme by USMS					
MS 104	Financial Management	4	-	4	
MS 106	Marketing Management	4	-	4	
MS 112	Human Resources Management	4	-	4	

* NUES: NON UNIVERSITY EXAMINATION SYSTEM
**Choice Based Credit System

Note:

(1) Students of other University Schools of Studies can take a maximum of two open courses in one semester.

(2) The Student is required to undergo Summer Training of Six to Eight Weeks immediately after the final Exam of 2nd Semester and obtain a Certificate of Training from the organization as per the format prescribed.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI

MASTER OF BUSINESS ADMINISTRATION (MBA)

THIRD SEMESTER

Code No.	Paper	L	T/P	Credits	Type of Course
MS 201	Summer Training Report	-	-	4	Ability Enhancement Course
MS 203	Management of International Business	4	-	4	Core
MS 205	Information Systems Management	4	-	4	Core
MS 207	Entrepreneurship Development	4	-	4	Core & Inter Disciplinary
MS 209	Business Simulation and Games (NUES) *	2	-	2	Ability Enhancement Course
	Elective – I	3	-	3	
	Elective – II	3	-	3	
	Elective – III	3	-	3	
	Elective – IV	3	-	3	
	Elective – V	3	-	3	
	Total	29	-	33	
Open Courses offered under CBCS Scheme by USMS					
MS 203	Management of International Business	4	-	4	
MS 207	Entrepreneurship Development	4	-	4	

* NUES: NON UNIVERSITY EXAMINATION SYSTEM
**Choice Based Credit System

Note : 1. All students must specialize in one major and one minor area. Five papers must be taken from the major area and three papers from the minor area of specialization in total.

2. Three elective papers must be taken in the third semester and two elective papers in the fourth semester from the area selected for major specialization.

3. For Project Dissertation to be done in 4th Semester, the allocation of Project Guide and selection of Topic will be done in the 3rd Semester and notified.

4. Students of other University Schools of Studies can take a maximum of two open courses in one semester

5. The Students can undertake Education cum Industrial Tour to any station within India or Abroad (optional) with the prior permission of Dean/Director.

LIST OF ELECTIVES

I.   MARKETING
- MS 211 - Consumer Behavior
- MS 213 - Sales and Distribution Management
- MS 215 - International Marketing
- MS 217 - Services Marketing
- MS 219 - Customer Relationship Management

II.   FINANCE
- MS 221- International Financial Management
- MS 223 - Financial Markets and Institutions
- MS 225 - Security Analysis and Investment Management
- MS 227 - Corporate Tax Planning
- MS 229 - Financial Econometric

III.   HUMAN RESOURCE
- MS 231 - Compensation Management
- MS 233 - Industrial Relations and Labor Laws
- MS 235 - Training and Development
- MS 237 - Performance Management
- MS 239 - Talent Management

IV.   INFORMATION TECHNOLOGY
- MS 241 - Systems Analysis and Design
- MS 243 - Enterprise Systems
- MS 245 - Network Applications and Management
- MS 247 - Database Management Systems   -   2 credits
- MS 249 - Information Security Management
- MS 261- Database Management Systems Lab-   1 credits

Note: The Lab MS 261 is a part of course MS 247 and the students opting for MS 247 will also study MS 261.

V.   INTERNATIONAL BUSINESS
- MS 251 - International Business Environment
- MS 253 - Export, Import Policies, Procedures, and Documentation
- MS 255 - WTO and Intellectual Property Rights
- MS 257 - International Economics
- MS 259 - International Business Negotiation

VI.   Operations & Analytics

MS 243- Enterprise Systems
 MS 247- Database Systems
MS 263- Operations and Supply Chain Management
MS 265- Advanced Business Analytics
MS 267- Services Operations Management
MS 269 – Project Management
MS 261- Database Systems Lab

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI
MASTER OF BUSINESS ADMINISTRATION (MBA)
FOURTH SEMESTER

Code No.	Paper	L	T/P	Credits	Type of Course
MS 202	Project Dissertation	-	-	6	Ability Enhancement Course
MS 204	Business Intelligence and Applications	3	-	3	Core
MS 206	Strategic Management	3	-	3	Core
MS 208	Corporate Social Responsibility, Human Values & Ethics	3	-	3	Ability Enhancement Course
	Elective – I	3	-	3	
	Elective – II	3	-	3	
	Elective – III	3	-	3	
	Total	18	-	24	
Open Courses offered under CBCS Scheme by USMS					
MS 208	Corporate Social Responsibility, Human Values & Ethics	3	-	3	
MS 210	Project Management	3	-	3	

Choice Based Credit System
NOTE:
(1) Students of other University Schools of Studies can take a maximum of two open courses in one semester
(2) Syllabus for the Fourth Semester papers shall be completed by April 15 every year and for the remaining period of the Academic Calendar the students will be required to complete the project and submit the same.

LIST OF ELECTIVES

I.   **MARKETING**
         MS 212 - Retail Management
         MS 214 - Advertising and Brand Management
         MS 216 - Internet Marketing
         MS 218 - Business Marketing

II.   **FINANCE**
         MS 220 - Strategic Financial Management
         MS 222 - Mergers, Acquisitions and Corporate Restructuring
         MS 224 - Financial Derivatives
         MS 226 - Behavioral Finance

III. **HUMAN RESOURCE**
         MS 228 - Strategic Human Resource Management
         MS 230 - Organizational Development
         MS 232 - Team Building
         MS 234 - Behaviour Testing & Counseling

IV.   **INFORMATION TECHNOLOGY**
         MS 236 - Digitalization and E-governance
         MS 238 - Software Project Management
         MS 240 - Web Technologies   -   2 credits
         MS 242 - Knowledge Management
         MS 252 - Web Technologies Lab.   -   1 credit
         Note: The Lab MS 252 is a part of course MS 240 and the students opting for MS 240 will also study MS 252.

V.   **INTERNATIONAL BUSINESS**
         MS 244 - Global Competitiveness and Strategic Alliance
         MS 246 - Supply Chain Management for International Business
         MS 248 - Managing Diversity
         MS 250 - Global Strategic Management

VI.   **Operations & Analytics**
         MS 216- Internet Marketing
         MS 236- Digitalization and E- governance
         MS 240- Web Technologies
         MS 252 - Web Technologies Lab.
         MS 254- Supply Chain Analytics

Total Credits =	117

To obtain the degree a student shall require 110 Credits.

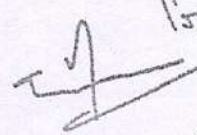# GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY

DWARKA, NEW DELHI-110078

BBA

Scheme and Syllabus

2021-22 onwards

(Approved by AC Sub Committee)

SCHEME OF EXAMINATION

&

SYLLABI

of

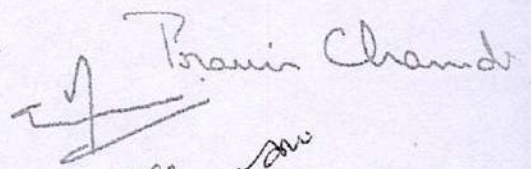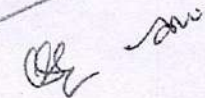**BACHELOR OF BUSINESS ADMINISTRATION**
(BBA)

for

First and Second Semesters

(w.e.f. 2021 – 2022 Academic Session)

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY
DWARKA, NEW DELHI-110078

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI
BACHELOR OF BUSINESS ADMINISTRATION PROGRAMME

Third Semester Examination

Code No.	Paper	Type	L	T/P	Credits
BBA 201	Business Laws	Core	4	-	4
BBA 203	Marketing Management	Core	4	-	4
BBA 205	Human Resource Management	Core	4	-	4
BBA 207	Management Accounting	Core/Skill Enhancement	4	-	4
BBA 209	Production and Operations Management	Core/Interdisciplinary	3	-	3
BBA 211	Business Research Methodology	Skill Enhancement	3	-	3
BBA 213	Business Research Methodology Lab	Skill Enhancement	-	4	2
BBA 215	NSS/NCC/NSO/others as notified by the university (NUES*)	Ability Enhancement	2		2
BBA 217	Environmental Studies	Interdisciplinary	4	-	4
		Total	28	4	30

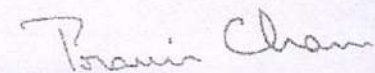*NUES: Non University Examination System

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI
BACHELOR OF BUSINESS ADMINISTRATION PROGRAMME

Fourth Semester

Code No.	Paper	Type	L	T/P	Credits
BBA 202	Business Analytics	Ability Enhancement	4	-	4
BBA 204	Financial Management	Core/Skill Enhancement	4	-	4
BBA 206	Corporate Governance, Ethics & Social Responsibility of Business	Core/ Interdisciplinary	4	-	4
BBA 208	Income Tax Law and Practice	Skill Enhancement /Interdisciplinary Course	4	-	4
BBA 210	MOOC*	Ability Enhancement	-	-	3
	Elective I (one paper to be selected from the list of electives)	Discipline Specific Electives	4	-	4
BBA 218	Minor Project -II	Skill Enhancement	-	-	3
		Total	20		26

List of Elective-I:
BBA-212 Training and Development
BBA-214 Sales Management
BBA-216 Financial Markets and Institutions

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI
BACHELOR OF BUSINESS ADMINISTRATION PROGRAMME

Fifth Semester Examination

Code No.	Paper	Type	L	T/P	Credits
BBA 301	Goods and Services Tax	Skill Enhancement	3	-	3
BBA 303	Business Policy and Strategy	Core	3	-	3
BBA 305	Information Systems Management	Skill Enhancement	3	-	3
BBA 307	Information Systems Management Lab	Skill Enhancement	-	4	2
	Elective II (one elective to be selected from the list of electives)	Discipline Specific Elective	4	-	4
BBA 315	Summer Training Report	Skill Enhancement	-	-	4
		Total	13	4	19

List of Elective-II
BBA-309 Marketing Analytics
BBA-311 Performance Management
BBA-313 Financial Modeling
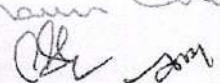
GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, NEW DELHI
BACHELOR OF BUSINESS ADMINISTRATION PROGRAMME

Sixth Semester Examination

Code No.	Paper	Type	L	T/P	Credits
BBA 302	Project Management	Core	3	-	3
BBA 304	Digital Marketing	Skill Enhancement	4	-	4
	Elective III* (one elective to be selected from the list of electives)	Discipline Specific Elective	4	-	4
BBA 312	Entrepreneurship Development	Interdisciplinary	3		3
BBA 314	Major Project	Skill Enhancement	-	-	6
		Total	14	-	20

List of Electives-III
BBA-306 HR Analytics
BBA-308 Advertising and Sales Promotion
BBA-310 Investment Analysis and Portfolio Management

SCHEME OF EXAMINATION
& SYLLABI

Of

BACHELOR OF ARTS (JOURNALISM & MASS COMMUNICATION)

as per

CHOICE BASED CREDIT SYSTEM

For

First to Sixth Semester
(to be effective from Academic Session 2016-2017 onwards)

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY
16-C DWARKA, NEW DELHI-110078

Tecnia Institute of Advanced Studies

Department of Journalism and Mass Communication
Programm: BA-JMC
FIRST SEMESTER
EXAMINATION

Course Code	Course Title	L	T/P	Credits
CORE COURSES	**THEORY**			
BA (JMC) 101	Communication: Concepts & Processes	4	-	4
BA (JMC) 103	Contemporary India: An Overview	4	-	4
BA (JMC) 105	Basics of Design and Graphics	4	-	4
PRACTICAL/SEMINARS/VIVA VOCE				
BA (JMC) 151	Communication Skills Lab	-	2	2
BA (JMC) 153	Contemporary India: Issues and Debates(Seminars/ Presentations)	-	2	2
BA (JMC) 155	Design & Graphics Lab – I	-	2	2
ELECTIVE COURSES (Select any one from the following)				
BA (JMC) 107	Personality Development	4	-	4
BA (JMC) 109	Writing Skills	4	-	4
BA (JMC) 111	Indian Culture (For Foreign Students Only)*	4	-	4
PRACTICAL/VIVA VOCE (Select Corresponding Lab based on Elective Course)				
BA (JMC) 157	Personality Development Lab	-	2	2
BA (JMC) 159	Writing Skills Lab	-	2	2
TOTAL		16	8*2=16**	24***

*Foreign students will study Course Code BA (JMC) 111, Course Title- Indian Culture as Elective Course along withCourse Code BA (JMC) 157, Course Title- Personality Development Lab as Practical Course.
**In practical courses, one credit equals two hours of teaching/ training/ learning.
***Total number of credits include credits of compulsory three Core Courses along with credits of their respective labsand credits of one Elective Course along with credits of corresponding lab/ seminars/ presentations/ workshops.

SECOND SEMESTER
EXAMINATION

Course Code	Course Title	L	T/P	Credits
CORE COURSES	**THEORY**			
BA (JMC) 102	Print Journalism	4	-	4
BA (JMC) 104	Media Laws and Ethics	4	-	4
BA (JMC) 106	Still Photography	4	-	4
PRACTICAL/VIVA VOCE				
BA (JMC) 152	Print Journalism Lab	-	2	2
BA (JMC) 154	Still Photography Lab	-	2	2
BA (JMC) 156	Design and Graphics Lab – II	-	2	2
ELECTIVE COURSES (Select any one from the following)				
BA (JMC) 108	Health Communication	4	-	4
BA (JMC) 110	Sports Journalism	4	-	4
PRACTICAL/VIVA VOCE (Select Corresponding Lab based on Elective Course)				
BA (JMC) 158	Health Communication Lab	-	2	2
BA (JMC) 160	Sports Journalism Lab	-	2	2

i. *Approved in the BOS Meeting held on 27th June 2016 & AC Sub Committee Meeting held on 22nd July 2016.*
ii. *To be effective from the Academic Session 2016-17 onwards.*

TOTAL	16	8*2=16	24

Soon after the End-Term Examination of the Second Semester, the student shall undergo training/internship in Print Media for a period of four weeks. She/he shall submit in duplicate hard copy and a soft copy of Summer Training Report (STR) along with the DVD of multi-media presentation incorporating the work done during the training/ internship, at least four weeks before the commencement of End Term Examination of the Third Semester. The Summer Training Report shall be supervised by the internal faculty appointed by the Director/ Principal of the institute/ college.

THIRD SEMESTER EXAMINATION

Course Code	Course Title	L	T/P	Credits
CORE COURSES	THEORY			
BA (JMC) 201	Development Communication	4	-	4
BA (JMC) 203	Basics of Radio Programming and Production	4	-	4
BA (JMC) 205	Basics of Video Camera, Lights and Sound	4	-	4
PRACTICAL/VIVA VOCE				
BA (JMC) 251	Radio Production Lab	-	2	2
BA (JMC) 253	Video Production Lab	-	2	2
BA (JMC) 255	Summer Training Report****	-	-	4
ELECTIVE COURSES (Select any one from the following)				
BA (JMC) 207	Radio Jockeying and News Reading	4	-	4
BA (JMC) 209	Video Editing	4	-	4
PRACTICAL/VIVA VOCE (Select Corresponding Lab based on Elective Course)				
BA (JMC) 257	Radio Jockeying and News Reading Lab	-	2	2
BA (JMC) 259	Video Editing Lab	-	2	2
TOTAL		16	6*2=12	26

**** The Summer Training Report carries 100 marks and shall be evaluated by the Board of Examiners comprising of an Internal Examiner and one External Examiner separately out of 50 marks each. The External Examiner shall be appointed by the Competent Authority.**

FOURTH SEMESTER EXAMINATION

Course Code	Course Title	L	T/P	Credits
CORE COURSES	THEORY			
BA (JMC) 202	Basics of Advertising	4	-	4
BA (JMC) 204	Basics of Public Relations	4	-	4
BA (JMC) 206	Television Programming and Production	4	-	4
PRACTICAL/VIVA VOCE				
BA (JMC) 252	Advertising Lab	-	2	2
BA (JMC) 254	Public Relations Lab	-	2	2
BA (JMC) 256	TV Production Lab	-	2	2
ELECTIVE COURSES (Select any one from the following)				
BA (JMC) 208	Television News: Reporting and Anchoring	4	-	4
BA (JMC) 210	Corporate Communication	4	-	4
PRACTICAL/VIVA VOCE (Select Corresponding Lab based on Elective Course)				
BA (JMC) 258	Television News: Reporting and Anchoring Lab	-	2	2
BA (JMC) 260	Corporate Communication Lab	-	2	2
TOTAL		16	8*2=16	24

Soon after the End Term Examination of the Fourth Semester, each student shall undergo a Functional Exposure Training/ Internship for four weeks in Radio/TV/Advertising /Public Relations/NGO. She/ he shall submit in duplicate hard copy and a soft copy of Functional Exposure Report [FER] along with the DVD of multi-media presentation containing the actual experiential learning, at least 4 weeks before the commencement of End Term Examination of the Fifth Semester. The Functional Exposure Report shall be supervised by the internal faculty appointed by the Director/ Principal of the Institute/ College.

i. *Approved in the BOS Meeting held on 27th June 2016 & AC Sub Committee Meeting held on 22nd July 2016.*
ii. *To be effective from the Academic Session 2016-17 onwards.*

FIFTH SEMESTER EXAMINATION

Course Code	Course Title	L	T/P	Credits
CORE COURSES	**THEORY**			
BA (JMC) 301	Basics ofNew Media	4	-	4
BA (JMC) 303	Media Research	4	-	4
BA (JMC) 305	Event Management	4	-	4
PRACTICAL/VIVA VOCE				
BA (JMC) 351	New Media Lab	-	2	2
BA (JMC) 353	Media Research Lab	-	2	2
BA (JMC) 355	Event Management Lab	-	2	2
BA (JMC) 357	Functional Exposure Report*****	-	-	4
ELECTIVE COURSES (Select any one from the following)				
BA (JMC) 307	Digital Media Marketing	4	-	4
BA (JMC) 309	Film Appreciation	4	-	4
PRACTICAL/VIVA VOCE (Select Corresponding Lab based on Elective Course)				
BA (JMC) 359	Digital Media Marketing Lab	-	2	2
BA (JMC) 361	Film Appreciation Lab	-	2	2
TOTAL		16	8*2=16	28

*****The Functional Exposure Report [FER] carries 100 marks. The report shall be evaluated out of 50 marks each by a Board of Examiners comprising of Director/Principal or her/his nominee and one External Examiner separately out of 50 marks each. The External Examiner shall be appointed by the Competent Authority.**

Each student shall be assigned the Final Project at the end of the Fifth Semester. The Final Project shall be pursued by her/him under the supervision of internal faculty in the Sixth Semester. The student shall make her/his Final Project on the theme/topic approved by the Director of the Institute/Principal in the Fifth Semester. She/ he shall submit the hard &soft copy of the Final Project in duplicate and also make the multi-media presentation on the same at least four weeks before the date of commencement of the End-Term Examination of the Sixth Semester. The project would be continuously monitored through tutorials and assignments and the record of the same would be submitted at the time of external examination duly certified by the internal faculty.

The Comprehensive Viva shall be based on all the courses of the programme and future projections of Media & Entertainment industry.

SIXTH SEMESTER EXAMINATION

Course Code	Course Title	L	T/P	Credits
CORE COURSES	**THEORY**			
BA (JMC) 302	Media Management and Entrepreneurship	4	-	4
BA (JMC) 304	Global Media: An Overview	4	-	4
BA (JMC) 306	Environment Communication	4	-	4
PRACTICAL/VIVA VOCE				
BA (JMC) 352	Final Project and Comprehensive Viva******	-	-	16
TOTAL		12	-	28

******The Final Project and Comprehensive Viva carries 100 Marks. It shall be evaluated by the Board of Examiners comprising of the Internal Examiner and External Examiner.**

Note: The Board of Examiners shall comprise of the Director/ Principal or her/his nominee and two External Experts out of which one would preferably be from the corporate world i.e. media organisation operating in the country. The quorum shall be deemed to have met if two out of three members are present. The External Examiners shall be appointed by the Competent Authority.

i. *Approved in the BOS Meeting held on 27th June 2016 & AC Sub Committee Meeting held on 22nd July 2016.*
ii. *To be effective from the Academic Session 2016-17 onwards.*

SCHEME OF EXAMINATION

&

SYLLABI

for

Bachelor of Computer Applications (BCA)
Scheme and Syllabus (w.e.f. AS 2021-22)

Offered by

University School of Information, Communication & Technology
GGSIPU at Affiliated Institutions of the University

**GURU GOBIND SINGH
INDRAPRASTHA
UNIVERSITY**

GuruGobindSinghIndraprasthaUniversity
Sector 16C, Dwarka, Delhi – 110 078 [INDIA]
www.ipu.ac.in

Approval History:

1. Scheme of study of first year, first year detailed syllabus and implementation rules approved by Board of Study of University School of Information, Communication and Technology on 31.10.2021.
2. Scheme of study, first year detailed syllabus and implementation rules approved by Academic Council Sub-committee on 22.11.2021.
3. Scheme of study, first year detailed syllabus and implementation rules approved by Academic Council on _____.
4. Scheme of study of second year, second year detailed syllabus and implementation rules approved by Board of Study of University School of Information, Communication and Technology on 10/09/22.
5. Scheme and syllabus of 3rd year approved by BoS on 24/08/2023 . And, the same approved in AC subcommittee on dt. 29/09/2023 for batch admitted in A.S. 2021 onwards.
6. 10. The marking scheme for all non-NUES papers (theory/practical) to be as:
7. 1. Teachers Continuous Evaluation: 40 marks
8. 2. Term end Theory Examinations: 60 marks
   w.e.f from the batch of A.S.: 2023-24 onwards. The syllabus remains the same. This provision was approved by the BoS on 24/08/2023. And, the same approved in AC subcommittee on dt. 29/09/2023 w.e.f. from A.S 2023-24.

Note: Year of implementation Academic Session 2021-22

Vision of the School

Create high-quality engineering professionals

Mission of the School

To serve humanity by creating professionally competent, socially sensitive engineers with high ethical values who can work as individuals or in groups in multicultural global environments.

I.   BACHELOR OF COMPUTER APPLICATIONS PROGRAMME DETAILS

1.   Aim

The programme covers rudimentary to advanced concepts in Computer Science and its applications in various domains. An exceptionally broad range of topics covering current trends and technologies in the field of information technology and computer science are included in the syllabus. The hands on sessions in Computer labs using various Programming languages and tools are also given to have a deep conceptual understanding of the topics to widen the horizon of students' self- experience.

Students, who choose BCA Programme, develop the ability to think critically, logically, analytically and to use and apply current technical concepts and practices in the core development of solutions in the multiple domains.

The knowledge and skills gained with a degree in Computer Application prepare graduates for a wide range of jobs in education, research, government sector, business sector and industry. In broader perspective the mission of teaching BCA is to produce employable IT workforce, that will have sound knowledge of IT and business fundamentals that can be applied to develop and customize solutions for various Enterprises.

2.   Programme Objectives

It is envisioned that the graduates passing out BCA degree, will achieve the following objectives and will be able to

Programme Objectives (POs)	Description
PO1	Understand the fundamental concepts of Computers, Software hardware and peripheral devices and evolution of computer technologies.
PO2	Familiarized with Business environment and Information Technology and its Applications in different domains.
PO3	Gain knowledge to identify, explain and apply functional programming and object-oriented programming techniques and use of databases to develop computer programs.
PO4	Analyze, design, implement and evaluate computerized solutions to real life problems, using appropriate computing methods including web applications.
PO5	Understand the front end and backend of software applications.
PO6	Gain expertise in at least one emerging technology.
PO7	Acquire knowledge about computer networks, network devices and their configuration protocols, security concepts at various level etc.
PO8	Apply techniques of software validation and reliability analysis to the development of computer programs.
PO9	Acquire Technical, Communication and management Skills to convey or present information, applications, instructions, policies, procedures, decisions, documentations etc. verbally as well as in writing.
PO10	Recognize the various issues related to society, environment, health and vivid cultures and understand the responsibilities to contribute in providing the solutions.
PO11	Acquire technical skills to lead a productive life in the society as a professional or as an entrepreneur.

3.   Programme Learning Outcomes

The completion of the BCA Programme shall enable a student to:

i. To design, implement, and evaluate computer-based system, process, component, or program to meet desired needs by critical understanding, analysis and synthesis

ii. Identify applications of Computer Science in other fields in the real world to enhance the career prospects

iii. Realize the requirement of lifelong learning through continued education and research.

iv. Use the concepts of best practices and standards to develop user interactive and abstract application

v. Understand the professional, ethical, legal, security, social issues and responsibilities.

The detailed list of programme learning outcomes is as follows:

PLO	Attribute	Description
PLO1	Communication Skills	The student should be able to communicate the technical information both orally and in writing professionally.
PLO2	Use of Software Tools	Create, select, adapt and apply suitable tools and technologies to a wide range of computational activities.
PLO3	Technical Skills	Acquire necessary knowledge of technical, scientific as well as basic managerial and financial procedures to analyze and solve real world problems within their work domain
PLO4	Domain Awareness	Clarity on both conceptual and application oriented skills in commerce, Finance & Accounting and it Applications in Business context.
PLO5	Technical Support	Must be able to provide technical support for various software applications.
PLO6	Analysis and investigation of Complex Computing Problems	Ability to analyze research and investigate complex computing problems through design of experiments, analysis and interpretation of data and synthesis of the information to arrive at valid conclusions.
PLO7	Design / Development of Solutions	Apply the knowledge gained in core courses to a broad range of advanced topics in computer science, to learn and develop sophisticated technical products independently.
PLO8	Imbibe Cyber Ethics	Awareness on ethics, values, sustainability and creativity aspects of technical solutions.

II.   CHOICE BASED CREDIT SYSTEM (CBCS)

The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses.

1. Types of courses in Choice Based Credit System (CBCS)
1.1 Core Course: A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
1.2 Elective Course: Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study   or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.
a)   **Discipline Specific Elective (DSE) Course:** Elective courses offered by the main discipline/subject of study are referred to as Discipline Specific Electives.
b)   **Project work/Dissertation** is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem. A candidate studies such a course on his own with an advisory support by a teacher/faculty member. The work done will have to be submitted in writing as a dissertation.
c)   **Generic Elective (GE) Course:** Elective courses that are generic or interdisciplinary by nature chosen from an unrelated discipline/ subject with an intention to seek exposure beyond discipline/s of choice are called Generic Electives. Students will have to choose one elective each in the third and fourth semester from the lists GE1 to GE2 given in this syllabus.

1.3 Ability Enhancement Courses (AEC): The Ability Enhancement (AE) Courses are the course that lead to Knowledge enhancement. These are of two types.
a)   **AE Compulsory Course (AECC):** Environmental Studies, English Communication/MIL Communication.
b)   **AE Elective Course (AEEC):** AEEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc. These courses / papers are to be chosen from a pool of courses designed to provide value-based and/or skill-based instruction.

III.PROGRAMME STRUCTURE

The BCA programme is a three-year course of 160 credits divided into six-semesters. A student is required to complete 150 credits for the completion of course and the award of degree.

	Academic Year	Odd Semester	Credits	Even Semester	Credits
Part – I	First Year	Semester I	26	Semester II	26
Part – II	Second Year	Semester III	27	Semester IV	27
Part – III	Third Year	Semester V	27	Semester VI	29
Total Credits – 162			80		82

Eligibility Criteria: The eligibility criteria for BCA programme for an academic session will be provided in the admission brochure (as for Academic Session (AS) 2021-22. The eligibility criteria of BCA programme for academic session 2022-23 onwards shall be as follows:

"Pass in 12th Class of 10+2 of CBSE or equivalent with a minimum of 50% marks in aggregate* with pass in English (core or elective or functional). Mathematics or (Computer Science / Informatics Practice / Computer Applications / Multimedia & Web Technology / Data Management Application / Web Application as compulsory subject of non-vocational stream with 50 theory and 50 practical ratio) or equivalent."

OR

"Three year Diploma in a branch of Engineering from a polytechnic duly approved by All India Council for Technical Education and affiliated to a recognized examining body with a minimum of 50% marks in aggregate."

Admission Criteria: Admission shall be based on the merit of the written test / Common Entrance Test Conducted by the University.

IV.INSTRUCTIONS FOR PAPER SETTERS

a)	Question Paper setter for each course must refer the instructions provided with the detailed syllabus of the specific courses.

b)	The question paper shall be preferably set from the prescribed text books and reference books, mentioned in the syllabus and should be at the level of the prescribed textbook(s).

V.CREDIT ALLOCATION (BCA PROGRAMME OF STUDY)

Course	Credits	
	Theory + Practical	**Theory + Tutorial**
	Core Course (6 credits) **(12 papers)**	**Core Course (4 credits)** **(7 papers)**
Core Course Theory 19 Papers	12x4=48	7x3=21
Core Course Practical / Tutorial* 19 Papers	12x2=24	7x1=7
Elective Course **(4 Papers of 5 credits each, 5 Papers of 4 credits each and 7 Papers of 2 credits each)**		
A.1. Discipline Specific Elective (4 Papers)	4x4 = 16	
A.2. Discipline Specific Elective Practical/Tutorial* (4 Papers)	1×4 = 04	
B.1. Generic Elective/ Interdisciplinary (2 Papers)		2x3 = 06
B.2. Generic Elective Practical/ Tutorial* (2 Papers)		2x1 = 02
1.Ability Enhancement Compulsory Courses(AECC) (3 Papers of 4 credit each and 1 Paper of 6 Credit including Minor & Major Project)	1x4 + 1x6= 10	2x4=8
2. Ability Enhancement Compulsory Courses(AECC) (2 Papers of 2 credit)		2x2 = 04
Skill Enhancement Courses (SEC) (5 Papers of 2 credit each)	5x2 = 10	
Co-Curricular Activities	2	
Total credit 162	**114**	**48**

*Wherever there is practical, there will be no tutorial and vice-versa.

V. CBCS COURSE STRUCTURE FOR BCA PROGRAMME

1. Semester wise placement of the courses

Semester	CORE COURSE (18)	Ability Enhancement Compulsory Course (AECC) (3)	Skill Enhancement Course (SEC) (2)	Elective: Discipline Specific (DSE) (5)	Elective: Generic (GE) (2)
I Total Credits 26	CC1 (4) Discrete Mathematics CC2 (4+2) Programming using 'C' Language CC3(4+2) Fundamentals of IT & Computers CC4 (4+2) Web Technologies	AECC 1 (4) Technical Communication			
II Total Credits 26	CC5 (4) Applied Mathematics CC6 (4+2) Web Based Programming CC7 (4+2) Data Structure And Algorithm Using 'C' CC8 108 (4+2) Database Management System	AECC2 (2) Environment Studies	SEC -1 (2)		
III Total Credits 27	CC9 (4) Computer Network CC10 (4) Computer Organization and Architecture CC11 (4+2) Object Oriented Programming with C++	AECC3 (2) Human Values and ethics	SEC -2 (2)	DSE- 1 (4+1)	Any course from the list GE-1(4)
IV Total Credits 27	CC12(4+2) Java Programming CC13 (4+2) Software Engineering	AECC4 (4) Introduction to Management & Entrepreneurship Development	SEC-3 (2) Personality Development Skills	DSE -2 (4+1)	Any course from the list GE-2 (4)
V Total Credits 27	CC14 (4+2) Operating System & Linux Programming CC15(4+2) Computer Graphics CC 16 (4) Cloud computing	AECC 5 Minor Project (4)	SEC-4 (2) Summer Internship	DSE -3 (4+1)	
VI Total Credits 29	CC17 (4) Datawarehousing and Data Mining CC18 (4) E-Commerce CC19 (4+2) Internet of Things	AECC 6 Major Project (6)	SEC-5 (2) Seminar/ Conference Presentation	DSE -4 (4+1)	
	NSS / NCC / Cultural Clubs / Technical Society / Technical Clubs	Mandatory (2)			

1.1 **Skill Enhancement Course 1 (SEC - 1)**
SEC 1 (choose one) Skill development course from the following
   (i)   MOOC course from SWAYAM / NPTEL of minimum 2 credits. Certificate is Mandatory for the credit acquisition.
   (ii)   Front End Design Tool VB.Net Lab
   (iii) Statistical Analysis using Excel

    (iv) Designing Lab Photoshop

SEC 2 (choose one)
    (i)   MOOC course From Swayam / NPTEL of minimum 2 credits. Certificate is Mandatory for the credit acquisition.
    (ii)   Designing Lab CorelDraw
    (iii)   ASP.Net
    (iv)   AR/VR
    (v)   Cyber Ethics

1.2   Discipline Specific Electives (DSE) (Choose any One Group of DSE)
Every institution shall offer at least to DSE groups to the students subject to conditions enumerated in this document.

DSE-A – Data Science & Analytics
    1.   Basics of Python Programming
    2.   Introduction to Data Science
    3.   Data Visualization & Analytics
    4.   Machine Learning with Python

DSE-B – Artificial Intelligence & Machine Learning
    1.   Basics of Python Programming
    2.   Introduction to Artificial Intelligence
    3.   Machine Learning with Python
    4.   Deep Learning with Python

DSE-C– Cyber Security
    1.   Cyber Security
    2.   Network Security
    3.   Web Security
    4.   IT Acts and Cyber Laws

DSE-D – Software Development
    1.   Basics of Python Programming
    2.   Web Development with Python
    3.   Web Development with Java & JSP
    4.   Mobile Application Development

1.3   Generic Elective (GE) for BCA Students

GE 1 (choose any One)
    (i)   Principles of Management & Organizational Behaviour
    (ii)   Any One Paper Offered as open elective by other School /Department / Programme to BCA students

GE 2 (choose any One)
    (i)   Digital Marketing
    (ii)   Principles of Accounting
    (iii)   Any One Paper Offered as open elective by other School / Department / Programme to BCA students

1.4 Generic (Open) Electives for other undergraduate programmes

The following Core courses of BCA programme may be offered as Generic Elective for other undergraduate programmes. Maximum number of students from other School / Department / Programme should not exceed 20% of total intake for the programme.

S.No.	Semester	Subject Code	Subject Name
1	I	BCA 105 BCA 173	Fundamentals of Computers & IT Practical – II IT Lab
2	I	BCA 107 BCA 175	Web Technologies Practical-III Web Tech Lab
3	II	BCA 108 BCA 176	Database Management System Practical – VI DBMS Lab
4	III	BCA 205 BCA 271	Object Oriented Programming using C++ Practical – VI C++ Lab
5	III	BCA 211	Basics of Python Programming
6	VI	BCA 304	E-Commerce

SEMESTER WISE EAMINATION SCHEME

Based on the above-mentioned course categories the semester wise Evaluation scheme of BCA Programme will be as follows:

FIRST SEMESTER EXAMINATION

Code No.	Paper	Course Category	L	T/P	Credits	Marks Internal	Marks External	Max Marks
Core Course Theory								
BCA 101	Discrete Mathematics	Core Course Theory	3	1	4	25	75	100
BCA 103	Programming Using 'C' Language	Core Course Theory	3	1	4	25	75	100
BCA 105#	Fundamentals of Computers & IT	Core Course Theory	3	1	4	25	75	100
BCA 107#	Web Technologies	Core Course Theory	3	1	4	25	75	100
Ability Enhancement Compulsory Course (AECC)								
BCA 109	Technical Communication	AECC	3	1	4	25	75	100
Core Course Practicals								
BCA 171	Practical – I 'C' Prog. Lab	Core Course Practical	0	4	2	40	60	100
BCA 173#	Practical – II IT Lab	Core Course Practical	0	4	2	40	60	100
BCA 175#	Practical-III Web Tech Lab	Core Course Practical	0	4	2	40	60	100
Bridge Course (Mandatory for Students from Non Mathematics background)								
BCA 181+	Bridge Course in Mathematics	Mandatory for Students from Non Mathematics background	2	0	0	Pass Grade	------	------
	Total Credits				**26**			**800**

+ **Non Credit subject mandatory for the students who do not have mathematics in 12th Std. The student has to obtain at least 40 marks. The examination of this paper shall be conducted by the concerned teacher teaching the course / paper as Teacher's Continuous Evaluation for total 100 marks. Only the pass or fail status is to be specified on the marksheet of examination and the result of the student. Passing in this paper is mandatory for the student.**

Generic Elective (GE) for other undergraduate programmes

TOTAL MARKS: 800

SECOND SEMESTER EXAMINATION

Code No.	Paper	Course Category	L	T/P	Credits	Marks Internal	Marks External	Max Marks
Core Course Theory								
BCA 102	Applied Mathematics	Core Course Theory	3	1	4	25	75	100
BCA 104	Web based Programming	Core Course Theory	3	1	4	25	75	100
BCA 106	Data Structure And Algorithm Using 'C'	Core Course Theory	3	1	4	25	75	100
BCA 108#	Database Management System	Core Course Theory	3	1	4	25	75	100
Ability Enhancement Compulsory Course (AECC)								
BCA 110	Environment Studies	AECC	2	0	2	25	75	100
***Skill Enhancement Course (AEEC) (Choose any One)**								
BCA 132	**MOOC course from SWAYAM / NPTEL	SEC-1	0	0	2	100	0	100
BCA 134	Front End Design Tool VB.Net Lab	SEC-1	0	4	2	100	0	100
BCA 136	Statistical Analysis using Excel	SEC-1	0	4	2	100	0	100
BCA 138	Designing Lab Photoshop	SEC-1	0	4	2	100	0	100
Core Course Practical								
BCA 172	Practical-IV WBP Lab	Core Course Practical	0	4	2	40	60	100
BCA 174	Practical – V DS Lab	Core Course Practical	0	4	2	40	60	100
BCA 176#	Practical – VI DBMS Lab	Core Course Practical	0	4	2	40	60	100
Total					**26**			**900**

 *NUES (Non – University Examination Subject) – Only Internal Assessment by the Institute)

Generic Elective (GE) for other undergraduate programmes

TOTAL MARKS: 900

**Instructions for MOOC course
1.   MOOC Course should be done from SWAYAM/NPTEL as per the guidelines of UGC.
2.   For securing the credits, the student is required to complete the assessment of the course and to provide the certificate of the course done from SWAYAM/NPTEL.
3.   The fees (if any) for the registration and/or assessment of the MOOC course must be borne by the student only.
4.   If the student secures more than 2 credits for the MOOC Course even then 2 credits shall be considered for this subject and the grade/marks provided by assessing authority shall be transferred to the university by the institution where the student is studying. The result of the MOOC courses shall be taken on record by the University's Examination Division and a result declared for these papers. The student must submit the result of such papers to their respective institutions. All results for the MOOC's course may be submitted before the completion of other requirements including credit requirements.

THIRD SEMESTER EXAMINATION

Code No.	Paper	Course Type	L	T/P	Credits	Marks Internal (T/P)	Marks External		Max Marks (T/P)
							Th	Pr	
Core Course Theory									
BCA 201	Computer Network	Core Course Theory	3	1	4	25	75	0	100
BCA 203	Computer Organization and Architecture	Core Course Theory	3	1	4	25	75	0	100
BCA 205#	Object Oriented Programming with C++	Core Course Theory	3	1	4	25	75	0	100
Ability Enhancement Compulsory Course (AECC) - Theory									
BCA-207	Human Values and Ethics	AECC	2	0	2	25	75	0	100
*Discipline Specific Elective (Choose any One) (Theory/Practical)									
BCAT 211T#	Basics of Python Programming	DSE-1	4	0	4	25	75	0	100
BCAP 211#	Basics of Python Programming Lab	DSE-1	0	2	1	40	0	60	100
BCAT 213	Cyber Security	DSE-1	4	0	4	25	75	0	100
BCAP 213	Cyber Security Lab.	DSE-1	0	2	1	40	0	60	100
**Generic Elective (Choose any One) (Theory/Practical)									
BCA 221	Principles of Management & Organizational Behaviour	GE-1	3	1	4	25	75	0	100
BCA 223	Open Elective offered by other Department/School /programme	GE-1	3	1	4	25	75	0	100
***Skill Enhancement Course (AEEC) (Choose any One)									
BCA 231	****MOOC course from SWAYAM / NPTEL	SEC-2	0	0	2	100	0	0	100
BCA 233	Designing Lab CorelDraw	SEC-2	0	4	2	100	0	0	100
BCA 235	ASP.Net	SEC-2	0	4	2	100	0	0	100
BCA 237	AR/VR	SEC-2	0	4	2	100	0	0	100
BCA 239	Cyber Ethics	SEC-2	2	0	2	100	0	0	100
Core Course Practical									
BCA 271#	Practical – VII C++ Lab #	Core Course Practical	0	4	2	40	0	60	100
	Total				**27**				**900**

Generic Elective (GE) for other undergraduate programmes
* First Subject from Discipline specific chosen group
** Choose one subject from list of GE-1
*** NUES (Non – University Examination Subject) – Only Internal Assessment by the Institute), that is the assessment shall be conducted by the institution for all 100 marks as Teacher's Continuous Assessment.

**Instructions for MOOC course
1. MOOC Course should be done from SWAYAM/NPTEL as per the guidelines of UGC.
2. For securing the credits, the student is required to complete the assessment of the course and to provide the certificate of the course done from SWAYAM/NPTEL.
3. The fees (if any) for the registration and/or assessment of the MOOC course must be borne by the student only.
4. If the student secures more than 2 credits for the MOOC Course even then 2 credits shall be considered for this subject and the grade/marks provided by assessing authority shall be transferred to the university by the institution where the student is studying. The result of the MOOC courses shall be taken on record by the University's Examination Division and a result declared for these papers. The student must submit the result of such papers to their respective institutions. All results for the MOOC's course may be submitted before the completion of other requirements including credit requirements.
5. If the student secures more than 2 credits for the MOOC Course even then 2 credits shall be considered for this subject and the grade/marks provided by assessing authority shall be transferred to the university.

FOURTH SEMESTER EXAMINATION

Code No.	Paper	Course Type	L	T/P	Credits	Marks Internal	Marks External		Max Marks
							Th	Pr	
Core Course Theory									
BCA 202	Java Programming	Core Course Theory	3	1	4	25	75	0	100
BCA 204	Software Engineering	Core Course Theory	3	1	4	25	75	0	100
Ability Enhancement Compulsory Course (AECC)									
BCA 206	Introduction to Management & Entrepreneurship Development	AECC	3	1	4	25	75	0	100
***Discipline Specific Elective (Choose any One)**									
BCAT 212	Introduction to Data Science	DSE-2	4	0	4	25	75	0	100
BCAP 212	Introduction to Data Science Lab.	DSE-2	0	2	1	40	0	60	100
BCAT 214	Introduction to Artificial Intelligence	DSE-2	4	0	4	25	75	0	100
BCAP 214	Introduction to Artificial Intelligence Lab.	DSE-2	0	2	1	40	0	60	100
BCAT 216	Network Security	DSE-2	4	0	4	25	75	0	100
BCAP 216	Network Security Lab.	DSE-2	0	2	1	40	0	60	100
BCAT 218	Web Development with Python and Django	DSE-2	4	0	4	25	75	0	100
BCAP 218	Web Development with Python and Django Lab.	DSE-2	0	2	1	40	0	60	100
****Generic Elective (Choose any One)**									
BCA 222	Digital Marketing	GE-2	3	1	4	25	75	0	100
BCA 224	Principles of Accounting	GE-2	3	1	4	25	75	0	100
BCA 226	Open Elective offered by other Department/ School /programme	GE-2	3	1	4	25	75	0	100
*****Skill Enhancement Course (AEEC)**									
BCA 232	Personality Development Skills	SEC-3	2	0	2	100	0	0	100
Core Course Practical									
BCA 272	Practical –XII Java Lab	Core Course Practical	0	4	2	40	0	60	100
BCA 274	Practical – IX SE Lab	Core Course Practical	0	4	2	40	0	60	100
	Total				**27**				**800**

* Second Subject from Discipline specific chosen group
** Choose one subject from list of GE-2
*** NUES (Non – University Examination Subject) – Only Internal Assessment by the Institute), that is the assessment shall be conducted by the institution for all 100 marks as Teacher's Continuous Assessment.

Summer Training will be held for 4 weeks after the end of fourth semester.
Viva-Voce will be conducted in fifth semester.
TOTAL MARKS: 800

FIFTH SEMESTER EXAMINATION

Code No.	Paper	Course Type	L	T/P	Credits	Marks Internal	Marks External		Max Marks
							Th	Pr	
Core Course Theory									
BCA 301	Operating System & Linux Programming	Core Course Theory	3	1	4	25	75	0	100
BCA 303	Computer Graphics	Core Course Theory	3	1	4	25	75	0	100
BCA 305	Cloud Computing	Core Course Theory	3	1	4	25	75	0	100
Ability Enhancement Compulsory Course (AECC)									
BCA 307	Minor Project	AECC	0	8	4	40	0	60	100
***Discipline Specific Elective (Choose any One)**									
BCAT 311	Machine Learning with Python	DSE-3	4	0	4	25	75	0	100
BCAP 311	Machine Learning with Python Lab.	DSE-3	0	2	1	40	0	60	100
BCAT 313	Web Security	DSE-3	4	0	4	25	75	0	100
BCAP 313	Web Security Lab.	DSE-3	0	2	1	40	0	60	100
BCAT 315	Web Development with Java & JSP	DSE-3	4	0	4	25	75	0	100
BCAP 315	Web Development with Java & JSP Lab.	DSE-3	0	2	1	40	0	60	100
Skill Enhancement Course (AEEC)									
BCA 331	**Summer Training Project	SEC-4	0	0	2	100	0	0	100
Core Course Practical									
BCA 371	Practical – X Linux - OS Lab	Core Course Practical	0	4	2	40	0	60	100
BCA 373	Practical – XI CG Lab	Core Course Practical	0	4	2	40	0	60	100
	Total				**27**				**800**

* **Third Subject from Discipline specific chosen group**
** **NUES (Non – University Examination Subject) – Only Internal Assessment by the Institute), that is the assessment shall be conducted by the institution for all 100 marks as Teacher's Continuous Assessment.**

TOTAL MARKS: 800

SIXTH SEMESTER EXAMINATION

Code No.	Paper	Course Type	L	T/P	Credits	Marks Internal	Marks External Th	Marks External Pr	Max Marks
Core Course Theory									
BCA 302	Data Ware Housing & Data Mining	Core Course Theory	3	1	4	25	75	0	100
BCA 304#	E- Commerce	Core Course Theory	3	1	4	25	75	0	100
BCA 306	Internet of Things	Core Course Theory	3	1	4	25	75	0	100
Ability Enhancement Compulsory Course (AECC)									
BCA 308	***Major Project	AECC	----	12	6	40	0	60	100
***Discipline Specific Elective (Choose any One)**									
BCAT 312	Data Visualization & Analytics	DSE-4	4	0	4	25	75	0	100
BCAP 312	Data Visualization & Analytics Lab.	DSE-4	0	2	1	40	0	60	100
BCAT 314	Deep Learning with Python	DSE-4	4	0	4	25	75	0	100
BCAP 314	Deep Learning with Python Lab.	DSE-4	0	2	1	40	0	60	100
BCA 316	IT Act and Cyber Laws	DSE-4	4	1	5	25	75	-	100
BCAT 318	Mobile Application Development	DSE-4	4	0	4	25	75	0	100
BCAP 318	Mobile Application Development Lab.	DSE-4	0	2	1	40	0	60	100
****Skill Enhancement Course (AEEC)**									
BCA 332	Seminar/ Conference Presentation	SEC – 5	0	0	2	100	0	0	100
Core Course Practical									
BCA 372	Practical – XII IOT Lab	Core Course Practical	0	4	2	40	0	60	100
BCA374	NSS / NCC / Cultural clubs / Technical Society / Technical club$	Mandatory	-	-	2	100	0	0	100
	Total				**29**				**800**

*Fourth Subject from Discipline specific chosen group

** NUES (Non – University Examination Subject) – Only Internal Assessment by the Institute), that is the assessment shall be conducted by the institution for all 100 marks as Teacher's Continuous Assessment. Evaluation will be based on the presentation on any latest technology/research article in in-house/external seminar/conference and will be conducted by the college committee only.

*** The student shall do the Major project in the Discipline Specific Area/Curriculum based subject /any emerging technology.

Generic Elective (GE) for other undergraduate programmes

$NUES : Comprehensive evaluation of the students by the concerned coordinator of NCC / NSS / Cultural Clubs / Technical Society / Technical Clubs, out of 100 as per the evaluation schemes worked out by these activity societies, organizations at the institution / University level; the co-ordinators shall be responsible for the evaluation of the same. These activities shall start from the 1st semester and the evaluation shall be conducted at the end of the 6th semester for students admitted in the first semester.

Note: Any Elective Subject will be offered if minimum 1/3 rd of the total strength of students in the class will opt for it.