The Heritage Institution

KANYA MAHA VIDYALAYA, JALANDHAR

(Autonomous)

Session 2022-23

Proceedings of 7ᵗʰ Meeting of Board of Studies

FACULTY OF COMPUTER SCIENCE & IT

Date: April 21, 2022

Time: 2:00 pm

Online through: Zoom Cloud Meeting
(Meeting ID: 895 69862696)

KANYA MAHA VIDYALAYA, JALANDHAR
(UGC Autonomous College)
PG Department of Computer Science & Applications

<u>Proceedings of the Seventh Meeting of Board of Studies held on</u> April 21, 2022

In the light of prevailing circumstances, seventh meeting of the Board of Studies was held through the zoom cloud meeting:

Date: Thursday 21.04.2022
Time: 2:00 p.m.
Venue: Online Meeting using Zoom Cloud Meetings (Meeting ID: 895 6986 2696)

The following members of Board of Studies attended the meeting and detailed minutes are listed below:

1.	Ms. Suman Khurana, Head, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar **(Chairperson)**	Present
2.	Dr. Munish Saini, Assistant Professor, Department of Computer Engineering & Technology, Guru Nanak Dev University, Amritsar**(University Nominee)**	Present
3.	Dr. Maninder Singh, Professor and Head, Department of Computer Science& Engineering, Thapar Institute of Engineering & Technology (Deemed University), Patiala**(Outside Parent University Nominee)**	Present
4.	Dr. Harsh K Verma, Professor and Head, Department of Computer Science, National Institute of Technology, Jalandhar**(Outside Parent University Nominee)**	Present
5.	Mr. Abhay Goswami/Ms. Jyoti, MD/Course Co-Ordinator – Nimble Technocrats, Jalandhar**(Industry Expert)**	Present
6.	Dr. Manisha Malhotra, Technical Architect, Larsen and Turbo Infotech Ltd. (L&T), New Delhi**(Alumni Expert)**	Present
7.	Dr. Pardeep Arora, Associate Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar	Present
8.	Dr. Ravi Khurana, Associate Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar	Present
9.	Ms. Nitin Khanna, Assistant Professor, Department of Computer	Present

	Science & Applications, Kanya Maha Vidyalaya, Jalandhar		
10.	Ms. Vandana Sharma, Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar		Present
11.	Ms. Nidhi Bhatia, Assistant Professor, Department of Computer Science & Applications, Kanya Maha Vidyalaya, Jalandhar		Present

At the outset, the Chairperson Mrs. Suman Khurana welcomed all the members of Board of Studies and extended her gratitude for all the support provided by them in modifying the course contents in the last sessions. Then she apprised the members that Session 2021-22 is running smoothly and progressing towards the end of the session –faculty members are conducting Assessment Tests, MSTs and the department is organizing various events and I.T. Fests as well. Sheacquainted them about the latest academic plans like - the introduction of Credit based continuous evaluation for PG Programs, two new certificate courses to be started and one ID course proposal for PG Programs of other departments. She further added that all these changes have been proposed for the Session 2022-23 and then intimated the members that some changes have been proposed for UG programs as well.After that she took their consent for taking up the agenda items one by one, so that the discussions could begin and after obtaining the consent, she started taking up the agenda items and following recommendations came up:
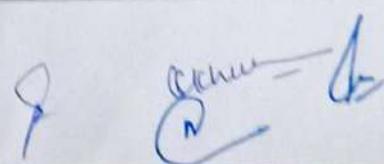
Item: Comp. Sc. 7: 2022:1
To confirm the Proceedings of sixth Board of Studies meeting held on April 24, 2021 and to discuss the Action Taken Report of the said meeting.
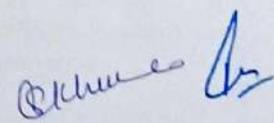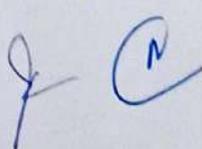
Proceedings:
The proceedings and Action Taken Report (ATR) of sixth Board of Studies meeting held on April 24, 2021 were approved.The Chairperson however again put up the summary of the proceedings for approval of the house and they approved it through Zoom meeting

Agenda No.	Agenda Item	Decision Taken in Meeting	Action Taken
Item: Comp. Sc. 6: 2021:2	To discuss and approve the syllabi of following classes - M.Sc. (CS) Sem I to IV M.Sc.	Following changes were suggested: • M.Sc.(CS)- To generalize the course names and to remove the word "Based on" with Lab courses • M.Sc. (IANS)- To remove the word "Based on" with Lab courses	The suggested changes were made in the course names and lab names and the approved syllabi was implemented

	(IANS) Sem I to IV for the session 2021-22 under Continuous Evaluation system		
Item: Comp. Sc. 6: 2021:3	To discuss and approve the syllabi of Post Graduate Diploma in Computer Applications	No Changes were suggested	Syllabus was kept same as for the Session 2020-21
Item: Comp. Sc. 6: 2021:4	To discuss and approve the syllabi of Under Graduate programs - BCA Sem I to VI and BSc (IT) Sem I to VI for the session 2021-22 under Continuous Evaluation system	Following changes were suggested: • BCA Sem I and II, the theory courses were merged with corresponding practical courses, code M was used, and Lab names to be generalized • BSc (IT) Sem I and II, the theory courses were merged with corresponding practical courses, code M was used, and Lab names to be generalized	The suggested changes were made and the approved syllabi was implemented
Item: Comp. Sc. 6: 2021:5	To discuss and approve the syllabi of DCA Sem I to II for the session 2021-22 under Continuous Evaluation system.	The syllabi were discussed and approved. No Change in the Content.	The approved syllabi were implemented

| Item: Comp. Sc. 6: 2021:6	To discuss and approve the syllabus of additional / optional paper - Specialization subject of B.Sc. (IT) Semester I to VI for the session 2021-22 under Continuous Evaluation System.	Following changes were suggested: • In Sem I, Paper 1115 was renamed and Sem III, data science projects to be replaced with applications and more content to be added	The suggested changes were made and approved syllabi was implemented
Item: Comp Sc. 6: 2021:7	To discuss and approve the syllabi of Computer Science / Applications Sem I to VI as an elective subject for the session 2021-22 under Continuous Evaluation System.	Following changes were suggested: • In Computer Science, name of technologies to be removed from course names and in Sem IV, C++ Language content to be removed to make the content generic. • In Computer Applications, contents of Operating System to be structured, Unix to be replaced with Linux and contents of Business data processing to be changed.	The suggested changes were made and approved syllabi was implemented
Item: Comp Sc. 6: 2021:8	To discuss and approve the syllabi of Computer as a subject for inter departmental courses – various semesters for the session 2021-22 under Continuous Evaluation System.	It was suggested to change the course contents of B.Sc. (Hons) Mathematics Sem III- Math Module and matrix operations using numPy array were added. Rest all the inter disciplinary courses were discussed and approved. No change in the content of other interdisciplinary courses.	The suggested changes were made and the approved syllabi implemented
Item: Comp Sc. 6: 2021:9	To intimate the BOS members about the existing teaching and research	The members were very happy and satisfied to know about innovative methods adopted (as per Annexure J)	Esteemed members appreciated the facultyfor their contribution (Patents of two faculty members appreciated)

	methodologies and innovative practices followed.		
Item: Comp Sc. 6: 2021: 10	To discuss the outcome of above stated courses and all the course schemes of running programs.	BOS members suggested to modify COs of Course schemes and detailed syllabi were discussed and approved.	Suggested changes were incorporated and the approved syllabi were implemented
Item: Comp Sc. 6: 2021: 11	To discuss and approve list of proposed paper setters, examiners and evaluators for all the classes Sem I to VI- all courses/ Subjects mentioned above for Session 2021-22.	List of Paper setters, examiners and evaluators was approved	List of Paper setters, examiners and evaluators was sent to the COE office.
Item: Comp Sc. 6: 2021: 12	To discuss the activities and plans of Department for Session 2021-22	It was suggested by the members to undertake the activities and plans be implemented in the light of COVID situations	The activities have been arranged through online and offline modes. (https://www.kmvjalandhar.ac.in/activities/?d=computer-science-and-applications&n=Computer%20 Science%20&%20 Applications &ref=/subjects/computer-science-applications)

The house approved the Item: Comp. Sc. 7: 2022:1

Item: Comp. Sc. 7: 2022:2

To discuss the syllabi of following Post Graduate classes for the session 2022-24 under Credit based Continuous Evaluation Grading System (CBCEGS):

- Master of Science (Computer Science) Semester I – IV   (Annexure A-1)
- Master of Science (Information & Network Security) Semester I - IV (Annexure A-2)
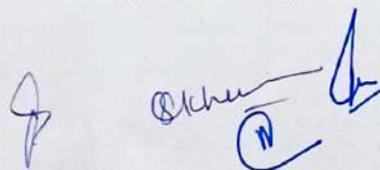
Proceedings:

Chairperson Ms. Suman Khurana discussed in detail about the introduction of Credit based Continuous Evaluation Grading System (CBCEGS) for Master of Science (Computer Science) and Master of Science (Information and Network Security) for the session 2022-24. The following points were highlighted, discussed and approved:

- **Master of Science (Computer Science) Semester I – IV**Session 2022-24 will have overall 98 credits with 90 mandatory and 8 Interdisciplinary. But the credits of Interdisciplinary courses will not be added in the calculation of CGPA/SGPA, as these will be qualifying courses, only grades will be assigned. The scheme of the course for credits is as follows:

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
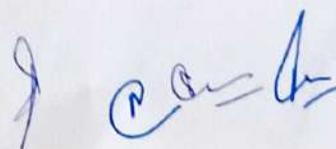### SCHEME AND CURRICULUM OF EXAMINATIONS OF TWO YEAR DEGREE PROGRAMME
Master of Science (Computer Science)
Credit Based Continuous Evaluation Grading System (CBCEGS)
(Session 2022-23)

Master of Science (Computer Science) Semester - I

Course Code	Course Title	Course Type	Hours per week L-T-P	Credit L-T-P	Credit Total	Marks Total	Marks Ext. L	Marks Ext. P	CA	Examination Time (in Hours)
MCSL-1111	Advanced Data Structures	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-1112	Advanced Computer Architecture	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-1113	Network Security Practices	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-1114	Discrete Structures	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-1115	Artificial Intelligence	C	4-0-0	4-0-0	4	100	80	-	20	3
MCSP-1116	Lab on Advanced Data Structures	C	0-0-6	0-0-3	3	100	-	80	20	3
Student can opt any one of the following Interdisciplinary compulsory courses		IDE			4	100	80	-	20	3
Total					23	600				

Course Code	Course Title		
DEC-1101	Effective Communication Skills		
IDEM-1362	Basics of Music (Vocal)		
DEH-1313	Human Rights and Constitutional Duties		
IDEW-1275	Indian Heritage: Contribution to the world		
	(Credits of these courses will not be added to SGPA)		

Master of Science (Computer Science) Semester - II

Course Code	Course Title	Course Type	Hours per week L-T-P	Credit L-T-P	Credit Total	Marks Total	Marks Ext. L	Marks Ext. P	Marks CA	Examination Time (in Hours)
MCSL-2111	Theory of Computation	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-2112	Image Processing	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-2113	Advanced Programming Concepts	C	4-0-0	4-0-0	4	100	80	-	20	3
MCSL-2114	Cloud Computing	C	4-0-0	4-0-0	4	100	80	-	20	3
MCSL-2115	Distributed Database Systems	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSP-2116	Lab on Advanced Programming Concepts	C	0-0-6	0-0-3	3	100	-	80	20	3
	Total				23	600				

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF TWO YEAR DEGREE PROGRAMME

Master of Science (Computer Science)

Credit Based Continuous Evaluation Grading System (CBCEGS)

(Session 2023-24)

Master of Science (Computer Science) Semester - III											
Course Code	**Course Title**	**Course Type**	**Hours per week**	**Credit**			**Marks**				**Examination Time (in Hours)**
			L-T-P	**L-T-P**	**Total**	**Total**	**Ext.**		**CA**		
							L	**P**			
MCSL-3111	Data Mining and Data Warehousing	C	4-0-0	4-0-0	4	100	80	-	20		3
MCSL-3112	System Software	C	4-0-0	4-0-0	4	100	80	-	20		3
MCSL-3113	Advanced Web Technologies	C	4-0-0	4-0-0	4	100	80	-	20		3
MCSL-3114	Design and Analysis of Algorithms	C	3-1-0	3-1-0	4	100	80	-	20		3
MCSL-3115	Software Testing	C	4-0-0	4-0-0	4	100	80	-	20		3
MCSP-3116	Lab on Advanced Web Technologies	C	0-0-6	0-0-3	3	100	-	80	20		3
Student can opt any one of the following interdisciplinary compulsory courses		IDE			4	100	80	-	20		3
Total					23	600					

IDEC-3101	Effective Communication Skills
DEM-3362	Basics of Music (Vocal)
IDEH-3313	Human Rights and Constitutional Duties
DEW-3275	Indian Heritage: Contribution to the world

(Credits of these courses will not be added to SGPA)

Master of Science (Computer Science) Semester - IV

Course Code	Course Title	Course Type	Hours per week L-T-P	Credit L-T-P	Credit Total	Marks Total	Marks Ext. L	Marks Ext. P	CA	Examination Time (in Hours)
MCSL-4111	Advanced Software Engineering	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-4112	Microprocessor and Its Applications	C	3-1-0	3-1-0	4	100	80	-	20	3
MCSL-4113	Foundation of Statistical Computing	C	4-0-0	4-0-0	4	100	80	-	20	3
MCSP-4114	Lab on Foundation of Statistical Computing	C	0-0-6	0-0-3	3	100	-	80	20	3
MCSD-4115	Dissertation	C	0-0-12	0-0-6	6	200	-	160	40	6
	Total				21	600				

(Approved syllabus attached herewith as Annexure A-1)

Master of Science (Information and Network Security) Semester I - IV Session 2022-24 will have overall 99 credits for session 2022-24 with 91 mandatory and 8 Interdisciplinary. But the credits of Interdisciplinary courses will not be added in the calculation of CGPA/SGPA, as these will be qualifying courses, only grades will be assigned. The scheme of the course for credits is as follows:

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF TWO YEAR DEGREE PROGRAMME

Master of Science (Information and Network Security)
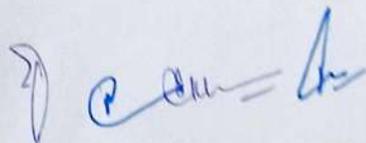### Credit Based Continuous Evaluation Grading System (CBCEGS)
(Session 2022-23)

Course Code	Course Title	Course Type	Hours Per Week L-T-P	Credit L-T-P	Credit Total	Marks Total	Marks Ext.	CA	Examination Time (in Hours)
Master of Science (Information and Network Security) Semester - I									

							L	P		
MINL-1111	Computer Networks	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-1112	Network Protocols	C	3-1-0	3-1-0	4	100	80	-	20	3
MINL-1113	Network Operating System	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-1114	Information Security and Threats	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-1115	Object Oriented Programming	C	4-0-0	4-0-0	4	100	80	-	20	3
MINP-1116	Lab on NOS and Object Oriented Programming	C	0-0-6	0-0-3	3	100	-	80	20	3
Student can opt any one of the following Interdisciplinary compulsory courses		IDE			4	100	80	-	20	3
	Total				23	600				

IDEC-1101	Effective Communication Skills
IDEM-1362	Basics of Music (Vocal)
IDEH-1313	Human Rights and Constitutional Duties
IDEW-1275	Indian Heritage: Contribution to the world

(Credits of these courses will not be added to SGPA)

Master of Science (Information and Network Security) Semester – II

Course Code	Course Title	Course Type	Hours per week	Credit		Marks				Examination Time (in Hours)
			L-T-P	L-T-P	Total	Total	Ext.		CA	
							L	P		
MINL-2111	Network Planning, Analysis and Performance	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-2112	Network Security Practices	C	3-1-0	3-1-0	4	100	80	-	20	3
MINL-2113	Computer Forensic	C	4-0-0	4-0-0	4	100	80	-	20	3

Course Code	Course Title	Course Type	Hours per week L-T-P	Credit L-T-P	Credit Total	Marks Total	Ext. L	Ext. P	CA	Examination Time (in Hours)
	Fundamentals									
MINL-2114	Secure Code Development	C	3-1-0	3-1-0	4	100	80	-	20	3
MINL-2115	Mobile Application Development and Security	C	4-0-0	4-0-0	4	100	80	-	20	3
MINP-2116	Lab on Mobile Application Development and Security	C	0-0-6	0-0-3	3	100	-	80	20	3
	Total				23	600				

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUMOF EXAMINATIONS OF TWO YEAR DEGREE PROGRAMME
Master of Science (Information and Network Security)
Credit Based Continuous Evaluation Grading System (CBCEGS)
(Session 2023-24)
#### Master of Science (Information and Network Security) Semester - III

Course Code	Course Title	Course Type	Hours per week L-T-P	Credit L-T-P	Credit Total	Marks Total	Ext. L	Ext. P	CA	Examination Time (in Hours)
MINL-3111	Cyber Incident Handling and Reporting	C	3-1-0	3-1-0	4	100	80	-	20	3
MINL-3112	Cloud Computing and its Security	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-3113	Proactive Security Tools and Technology	C	3-1-0	3-1-0	4	100	80	-	20	3
MINL-3114	Penetration Testing and Auditing	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-3115	Cryptography and Network Security	C	3-1-0	3-1-0	4	100	80	-	20	3
MINP-3116	Lab on Penetration Testing and Virtualization	C	0-0-6	0-0-3	3	100	-	80	20	3
Student can opt any one of the following Interdisciplinary compulsory courses		IDE			4	100	80	-	20	3

					23	600					
	Total				23	600					

Course Code	Course Title										
IDEC-3101	Effective Communication Skills										
IDEM-3362	Basics of Music (Vocal)										
IDEH-3313	Human Rights and Constitutional Duties										
IDEW-3275	Indian Heritage: Contribution to the world										
	(Credits of these courses will not be added to SGPA/CGPA)										

Master of Science (Information and Network Security) Semester - IV

Course Code	Course Title	Course Type	Hours per week L-T-P	Credit L-T-P	Credit Total	Marks Total	Ext. L	Ext. P	CA	Examination Time (in Hours)
MINL-4111	Intrusion Detection System	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-4112	Reverse Engineering and Malware	C	4-0-0	4-0-0	4	100	80	-	20	3
MINL-4113	Ethical Hacking	C	3-1-0	3-1-0	4	100	80	-	20	3
MINL-4114	Blockchain for Enterprise Applications	C	3-1-0	3-1-0	4	100	80	-	20	3
MIND-4115	Dissertation	C	0-0-12	0-0-6	6	200	-	160	40	6
	Total				22	600				

(Approved syllabus attached herewith as Annexure A-2)

Examination and Evaluation Policy passed in the Second Meeting of Academic Council Dated 24-08-2018 under Agenda Item (AC 2: 2018: 4 (Annexure C)) for UG and PG Vocational Programmes under Credit Based Continuous Evaluation Grading System (CBCEGS), with modifications approved in the Fourth Meeting of Academic Council dated 23.11.2019 under Agenda Item (AC 4: 2019: 4(v)) will be extended and implemented to all PG Diploma and Degree Programmes.

The house approved the Item: Comp. Sc. 7: 2022:2
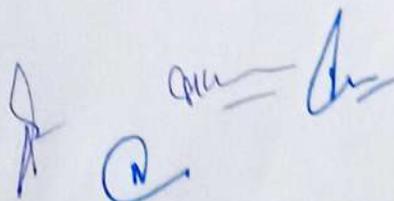
To discuss the syllabi of Post Graduate Diploma in Computer Applications for the session 2022-23under Credit Based Continuous Evaluation Grading System.

- Post Graduate Diploma in Computer Applications Semester I - II   (Annexure B-1)

Proceedings:

Chairperson Ms. Suman Khurana discussed in detail about the introduction of Credit based Continuous Evaluation Grading System (CBCEGS) for Post Graduate Diploma in Computer Applications for session 2022-23 -overall 48credits, syllabi details were highlighted, discussed and approved.

KANYA MAHA VIDYALAYA, JALANDHAR (AUTONOMOUS)

SCHEME AND CURRICULUM OF EXAMINATIONS OF ONE YEAR POST GRADUATE DIPLOMA
Post Graduate Diploma in Computer Applications
Credit Based Continuous Evaluation Grading System (CBCEGS)
(Session 2022-2023)

Post Graduate Diploma in Computer Applications Semester – I										
Course Code	Course Title	Course Type	Hours Per Week L-T-P	Credits		Marks				Examination time (in Hours)
				L-T-P	Total	Total	Th	P	CA	
PCAM-1111	PC Computing-I (Back Office Operations)	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAM-1112	PC Computing-II (Professional DTP)	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAM-1113	Fundamentals of Computer and Operating System	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAM-1114	Programming in C	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAM-1115	Multimedia Systems	C	3-0-4	3-0-2	5	100	50	30	20	3+3
TOTAL					25	500				

Post Graduate Diploma in Computer Applications Semester – II

Course Code	Course Title	Course Type	Hours Per Week L-T-P	Credits		Marks				Examination time (in Hours)
				L-T-P	Total	Total	Th	P	CA	
PCAL-2111	Optional Course	O	4-0-0	4-0-0	4	100	80	-	20	3
PCAM-2112	Network Concepts and Management	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAM-2113	Database Management System	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAM-2114	Introduction to Scripting Languages and Web Designing	C	3-0-4	3-0-2	5	100	50	30	20	3+3
PCAP-2115	Minor Project	C	0-0-8	0-0-4	4	100	-	80	20	3
TOTAL					23	500				

List of Optional PCAL-2111:
Option (i): Introduction to Cyber Security
Option (ii): E-Commerce

Note:
C- Compulsory Course
O-Optional Course

(Approved syllabus attached herewith as Annexure B-1)

Examination and Evaluation Policy passed in the Second Meeting of Academic Council Dated 24-08-2018 under Agenda Item (AC 2: 2018: 4 (Annexure C)) for UG and PG Vocational Programmes under Credit Based Continuous Evaluation Grading System (CBCEGS), with modifications approved in the Fourth Meeting of Academic Council dated 23.11.2019 under Agenda Item (AC 4: 2019: 4(v)) will be extended and implemented to all PG Diploma and Degree Programmes.

The house approved the Item: Comp. Sc. 7: 2022:3
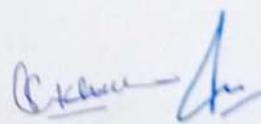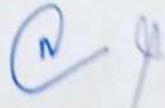
Item: Comp. Se. 7: 2022:4

To discuss the syllabi of following Under Graduate courses for the session 2022-23 under Continuous Evaluation system:

- Bachelor of Computer Applications Semester I - VI **(Annexure C-1)**
- Bachelor of Science (Information Technology) Semester I - VI **(Annexure C-2)**
- Master of Science (Computer Science) Semester III – IV **(Annexure C-3)**
- Master of Science (Information and Network Security Semester III – IV **(Annexure C-4)**

Proceedings:

The proposed syllabus and course outcomes of **Bachelor of Computer Applications Semester I – VI** under continuous evaluation system for the session 2022-23 was discussed by Board members and they approved the Syllabus with following changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted
Bachelor of Computer Applications Semester- I COURSE CODE: BCAM-1114 INTRODUCTION TO PROGRAMMING – C	--	Unit III Self-referenced structure
Bachelor of Computer Applications Semester – II COURSE CODE: BCAM–2115 INTRODUCTION TO OBJECT ORIENTED PROGRAMMING- I	--	Unit I Candidate & Abstract Classes to be examples of the Design process.
Bachelor of Computer Applications Semester – IV COURSE CODE: BCAL–4112 INFORMATION SYSTEMS	Unit I Information needs of business Sources of information – Primary and Secondary Unit II Introduction to System Planning Information systems: Rapid Application Development. Types of Decisions - Structured,	Unit I Database, Capturing of Information Unit II Technologies for Information System: Latest trends in Hardware and Software. UNIT - III Types of Decisions: Structured, Unstructured and

	Unstructured and Semi Structured. UNIT - III Management Information System: Need, Components and Functions of MIS. Planning of MIS, Implementation and Controlling MIS. Decision Support System: Meaning, Characteristics, Types and Components of DSS. UNIT - IV Transaction Processing Systems: Meaning, Characteristics, Components of TPS. Difference between MIS, DSS and TPS.	Semi Structured, Decision Support System (DSS), Transaction processing systems (TPS), office Automation systems (OAS). UNIT - IV Management Information System (MIS) and Expert System
Bachelor of Computer Applications Semester – IV COURSE CODE: BCAL-4113 INTERNET APPLICATIONS	Unit I Search engine and its working, Intranet and Extranet Unit II Web Development: HTML – Basics, Text Formatting, font, entities, Links, Images and Image maps, Forms, Form labels, fieldset/legend, Tables, Frames, Backgrounds / colors, Style / layout, Media. HTML declaratives - head section, meta tags, scripts, declarations, document types. Unit III CSS – Introduction, Stylesheets, Syntax, Classes &ID's, Text properties, Font properties, list, border, margin, padding, table, Class properties, Position properties JavaScript – Basics, variables,	UNIT II WWW: Web browsing (opening, viewing, saving and printing a web page and bookmark). UNIT-III Web Designing: HTML – Elements, Attributes, Formatting, Paragraphs, Links, Lists, Tables, Images, Frames, Forms. CSS – Types, Syntax, Colors, Fonts, Alignment. JavaScript – Syntax, Operators, Data-Types UNIT-IV Search Engine: About search engine, component of search engine, working of search engine, difference between search engine and web

	Functions, popup boxes, Conditions and loops, arrays, objects, strings, events, errors, DOM, elements, cookies Unit-IV WordPress: Installation, Configuration, Management - Managing Posts, comments, pages, categories, Plugins, Widgets, Tags, images, users, Import and export content, Updating WordPress. Useful Plugins – MailChimp, Creating Gallery, Stripe Checkout, Verified Authorship, Google Maps, Google Analytics, Live Chat and Social Profile Widget	directory. Intranet and Extranet: Introduction, application of intranet, business value of intranet, working of intranet, role of extranet, working of extranet, difference between intranet and extranet
Bachelor of Computer Applications Semester – III COURSE CODE: BCAL-3111 FOUNDATION OF DATA SCIENCE **Course shifted from semester IV to III**	Unit I Understanding Data Analytics: Need, Characteristics – Four Vs. UNIT- II Data Collection: Data Collection sources, Data collection methods – Primary data collection methods – Interviews, Questionnaires and Secondary data collection methods. Data collection Tools – online and offline. Types of Data Analytics:Descriptive. Predictive, Diagnostic, Prescriptive. UNIT-III Domain Data Analysis: Exploratory and Confirmatory data analysis Application Areas and Challenges in DataScience. Technical Skills of a data	UNIT- II Application Areas and Challenges in Data Science. Job Roles in Data Science. Domain Data Analysis: Exploratory and Confirmatory data analysis. UNIT-III Data Collection and Data Analytics. Data Collection sources, Data collection methods – Primary data collection methods and Secondary data collection methods. UNIT-IV Data Collection Tools – online and offline. Understanding Data Analytics: Need, Characteristics. Types: Descriptive. Predictive, Diagnostic, Prescriptive

	Analyst. Job Roles in Data Science. UNIT-IV Data Storytelling: Benefits and Best Practices, data visualization. Introduction to Power BI: Need, Features, Components, Architecture and Services. Creating a Sample dashboard.	
Bachelor of Computer Applications Semester- III BCAL -4114 Computer Architecture **Course shifted from semester III to IV**	No change in Contents	
Bachelor of Computer Applications Semester – V COURSE CODE: BCAL-5111 COMPUTER NETWORKS	--	Unit II ISDN service transmission. Unit IV Network Services: File transfer, Access & Management, Electronic Mail, Remote login
Bachelor of Computer Applications Semester – V COURSE CODE: BCAL-5112 WEB TECHNOLOGIES	UNIT I ES6 – Variables, Arrow functions, Class and Inheritance. Introduction to React - Render HTML, JSX. React Components – Class, Function, Constructor, Nested Component, Lifecycle of React Components Data Handling – Props, Props Validation, State, Form and Event Handling in React, Fetching Data through API. UNIT – II Introduction to Server Side	UNIT I Web Essentials – Client/Server Architecture, Web Server, Webpage, Website, Internet, Protocol, OSI model, IP Addresses, Port, HTTP Method, HTTP Response/Request, HTTPS, URL, Browser Architecture, E-mail Protocols, World Wide Web, DNS. HTML – Basics, Program Structure, Headings, Paragraph, Styling, Formatting, Hyperlink, Image, Table, List, Frame, Block, Entities, Form, Form Elements, Introduction to

	Scripting using PHP - Basics, Control Statement, Array, Functions. Core PHP Concepts - Superglobals, Form Handling, PHP Include, Sessions, PHP File Handling, File Upload, Cookies, Error Handling, Exception Handling. Access MySQL Database in PHP. Introduction to OOPs in PHP – Classes, Object, Constructor, Inheritance. UNIT – III XML – Basics, Structure, Namespace, Parsing. AJAX – Fetching response from server (Textual and XML form), Basics of JQuery. Introduction to REST UNIT IV Hosting - Overview of Domain, Hosting, SSL Certificates and steps to host a website. Introduction to Emerging Web Technologies - Introduction to Chatbot, Artificial Intelligence and Machine Learning basics used in websites.	XHTML. CSS – Types, Selector, Colors, Background, Box Model, Text, Font, Display, Position, Float, Clear, Rounded Corners. UNIT – II JavaScript – Basics, Features, Advantages, Limitations, Types, Basics, Functions, Control Statement, Arrays, JavaScript Objects, Host Objects. DOM – Introduction, Methods, Accessing HTML and CSS, Events, Event Listener, Nodes and Collection. BOM – Window, Screen, History, Navigation. UNIT – III ES6 – Variables, Arrow functions, Class and Inheritance. Introduction to React - Render HTML, JSX. React Components – Web component, Class, Function, Constructor, nested Component. UNIT IV Data Handling – Props, Props Validation, State, Fetching Data through API. Lifecycle of React Components, Form Handling in React, Event Handling in React, React Sass.
Bachelor of Computer Applications Semester – V COURSE CODE: BCAL-5114 OBJECT ORIENTED PROGRAMMING-II	UNIT - I JAVA BASICS: Introduction to Java, Features of Java, Structure of a Java Program, primitive data types, keywords, Identifiers, literals, operators	UNIT-I Introduction to Object Oriented Programming using Java: Features, Object Orientation Concepts, Java Virtual Machine, Data Types,

and comments.

OOPS: Object oriented concepts Advantage of OOPs, Objects and Classes,

Strings: Declaring a string, Immutable string, string comparison, concatenation, substring, string tokenizer.

UNIT - II

Inheritance: what is inheritance, types of inheritance, static import, Method overloading, method overriding, Runtime polymorphism, super keyword, final keyword

Interfaces: Abstract classes, declaring an interface, relationship between classes and interface, interface inheritance, implementing multiple inheritance using interface

Packages: what are packages, advantages of using packages, accessing package from another package, sub packaging, running packages by setting path and classpath.

UNIT - III

Exception Handling: what is exception handling, checked and unchecked exceptions, try-catch, try-multiple catch, try – finally, throw and throws

Multithreading: What is a thread, life cycle of a thread, creating a thread, sleeping a thread, joining a thread, thread priority

UNIT - IV

Input/Output: File input stream,

Operators, Control Structures.

UNIT-II

Introduction to OOPS: Classes & Methods, Constructors, Inheritance& Polymorphism

UNIT-III

Packages & Interfaces, Multithreading in Java, Exception Handling.

UNIT-IV

I/O Stream Classes & File Handling. Applets: Applet basics, Applet Life Cycle, Applet Display, Repaint, Parameter Passing.

	File output stream, Buffered output stream, Buffered inputstream. Database connectivity: JDBC, JDBC drivers, steps to connect to the database, connectivity with MYSQL.	
Bachelor of Computer Applications Semester – VI COURSE CODE: BCAP - 6114 PROJECT	1. Candidates have to submit one hard copy and two CDs/DVDs of documentation which shall be kept with the HoD in the college only. Further, supervisor/guide shall forward one copy of DVD containing all the documentation files of the students (file name to be saved as Rollno_of_the_ student.pdf) to the COE Office. The Covering letter (duly signed by the guide and Head of the department) should contain the following information. Candidate name, Roll no, Project Title of the student and .pdf file name of her project documentation. 2. The software module / website maybe developed in groups, consisting of at most two students in a group. 3. The college shall depute guide(s)/supervisor(s) under whose supervision the software module shall be developed. The guide/supervisor shall clarify that the work done is original and authenticated. The certificate found to be incorrect at any stage shall attract the proceedings against all the stakeholders, as per	2. The soft copy of the module shall be submitted to the College/Institute till April 5 of the respective semester. 3. The software module shall be developed in groups, consisting of at most two students in a group. 4. The respective college shall depute guide(s)/supervisor(s) under whose supervision the software module shall be developed. The guide/supervisor shall clarify that the work done is original & authenticated. The certificate found to be incorrect at any stage shall attract the proceedings against all the stakeholders, as per rules.

		rules.	

The proposed syllabus and course outcomes of **Bachelor of Science (Information Technology) Semester I – VI** under continuous evaluation system for the session 2022-23 was discussed by Board members and they approved the Syllabus with following changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted
Bachelor of Science (Information Technology) Semester- II COURSE CODE: BITM–2115 INTRODUCTION TO OBJECT ORIENTED PROGRAMMING – I	--	Unit I Candidate& Abstract Classes to be examples of the Design process
Bachelor of Science (Information Technology) Semester – III COURSE CODE: BITL–3113 SYSTEM ANALYSIS AND DESIGN	Unit I Introducing System Analysis and Design, SA&D Concepts, Qualifications and Responsibilities of System Analyst as an agent of change Determining Feasibility, types of feasibility Information Requirements analysis: Sampling and investigating data through Interviews and Questionnaires, use of Structured English, Decision tables UNIT–II System Analysis Process: Using data flow diagrams, data dictionaries, describing Process specifications and system proposal Module specifications, Module coupling and cohesion, Top-down and bottom-up design	Unit I Feasibility importance. Information Gathering Tools, Cost Benefit Analysis, Role and Responsibilities of System Analyst. Unit II Tools for Structured design and System design considerations.

	UNIT–III Tools for Structured design and System design considerations UNIT–IV Different modes for training users.compare and contrast different types of maintenance.	
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITL–4111 DATABASE MANAGEMENT SYSTEM	Unit II E–R diagram	Unit I E–R diagram Unit II Query Processing and Optimization
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITL–4112 INTERNET APPLICATIONS	Unit I Search engine and its working, Intranet and Extranet Unit II Web Development: HTML – Basics, Text Formatting, font, entities, Links, Images and Image maps, Forms, Form labels, field set/legend, Tables, Frames, Backgrounds / colors, Style / layout, Media. HTML declaratives - head section, meta tags, scripts, declarations, document types. Unit III CSS – Introduction, Stylesheets, Syntax, Classes &ID's, Textproperties, Font properties, list, border, margin, padding, table, Class properties, Position properties JavaScript – Basics, variables, Functions, popup boxes, Conditions and loops, arrays, objects, strings, events, errors,	Unit II WWW: Web browsing (opening, viewing, saving and printing a web page and bookmark). UNIT-III Web Designing: HTML – Elements, Attributes, Formatting, Paragraphs, Links, Lists, Tables, Images, Frames, Forms. CSS – Types, Syntax, Colors, Fonts, Alignment. JavaScript – Syntax, Operators, Data-Types UNIT-IV Search Engine: About search engine, component of search engine, working of search engine, difference between search engine and web directory.

	DOM, elements, cookies **UNIT-IV** WordPress: Installation, Configuration, Management – Managing Posts, comments, pages, categories, Plugins, Widgets, Tags, images, users, Import and export content, Updating WordPress. Useful Plugins – MailChimp, Creating Gallery, Stripe Checkout, Verified Authorship, Google Maps, Google Analytics, Live Chat and Social Profile Widget	Intranet and Extranet: Introduction, application of intranet, business value of intranet, working of intranet, role of extranet, working of extranet, difference between intranet and extranet
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITL–4113 OBJECT ORIENTED PROGRAMMING- II	**UNIT - I** JAVA BASICS: Structure of a Java Program, primitive data types, keywords, Identifiers, literals and comments. OOPS: Advantage of OOPs, Objects and Classes, Strings: Declaring a string, Immutable string, string comparison, concatenation, substring, string tokenizer. **UNIT - II** Inheritance: what is inheritance, types of inheritance, static import, Method overloading, method overriding, Runtime polymorphism, super keyword, final keyword Interfaces: Abstract classes, declaring an interface, relationship between classes and interface, interface inheritance, implementing multiple inheritance using interface Packages: what are packages, advantages of using packages,	**UNIT-I** JavaVirtual Machine, Data Types, Control Structures. **UNIT-II** Introduction to OOPS: Classes & Methods, Constructors, and Inheritance andPolymorphism **UNIT-III** Packages & Interfaces, Multithreading in Java, Exception Handling. **UNIT-IV** I/O Stream Classes & File Handling Applets: Applet basics, Applet Life Cycle, Applet Display, Repaint, Parameter Passing.

	accessing package from another package, subpackaging, running packages by setting path and classpath. UNIT - III Exception Handling: what is exception handling, checked and unchecked exceptions, try-catch, try-multiple catch, try – finally, throw and throws Multithreading: What is a thread, life cycle of a thread, creating a thread, sleeping a thread, joining a thread, thread priority UNIT - IV Input/Output: File input stream, File output stream, Buffered output stream, Buffered inputstream. Database connectivity: JDBC, JDBC drivers, steps to connect to the database, connectivity with MYSQL.	
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITL–4114 E-BUSINESS	UNIT – I Introduction to E – Commerce:Concept,Features, Benefits, E-Commerce v/s. Traditional Commerce. E-Commerce Framework. E-Commerce Models. Steps involved in opening your own online business, Role of Website and the technologies needed to build a website. UNIT – II working of EDI system UNIT – III	UNIT – I E – Commerce: Definition, Aims, Benefits, Types of E – Commerce. Steps to Start E – Commerce: H/W & S/W Requirements, steps involved in opening your own online business UNIT II Paper documents versus Electronic documents. Concerns for E – Commerce: Legal and regulatory issues, Laws for E – Commerce, E-

	Concerns for E – Commerce: Legal and regulatory issues, Laws for E – Commerce, E-Commerce in India, Sections of IT Act for E-Commerce transactions.E-Commerce security Issues and Measures.	Commerce in India. UNIT III Issues that confront in relation to securing electronic transactions. Implementation of digital signatures.
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITP–4115 LAB ON DATABASE MANAGEMENT SYSTEM *** Change in Marks - Max. Marks: 25 Practical: 20 CA: 05	Marks division changed, no change in contents	
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITP–4116 LAB ON INTERNET APPLICATIONS AND WEB DESIGNING *** New practical Paper introduced	New Practical Paper introduced	
Bachelor of Science (Information Technology) Semester- IV COURSE CODE: BITP–4117 LABON OBJECT ORIENTED PROGRAMMING- II *** Course Code Changed BITP-4116 to BITP-4117	No change in contents	
Bachelor of Science (Information Technology)	--	Unit II

Semester – V COURSE CODE: BITL-5111 COMPUTER NETWORKS		ISDN service transmission Unit IV Network Services: File transfer, Access & Management, Electronic Mail, Remote login
Bachelor of Science (Information Technology) Semester – V COURSE CODE: BITL-5112 WEB TECHNOLOGIES	UNIT I ES6 – Variables, Arrow functions, Class and Inheritance. Introduction to React - Render HTML, JSX. React Components – Class, Function, Constructor, Nested Component, Lifecycle of React Components Data Handling – Props, Props Validation, State, Form and Event Handling in React, Fetching Data through API. UNIT – II Introduction to Server Side Scripting using PHP - Basics, Control Statement, Array, Functions. Core PHP Concepts - Superglobals, Form Handling, PHP Include, Sessions, PHP File Handling, File Upload, Cookies, Error Handling, Exception Handling. Access MySQL Database in PHP. Introduction to OOPs in PHP – Classes, Object, Constructor, Inheritance. UNIT – III XML – Basics, Structure, Namespace, Parsing. AJAX – Fetching response from	UNIT I Web Essentials – Client/Server Architecture, Web Server, Webpage, Website, Internet, Protocol, OSI model, IP Addresses, Port, HTTP Method, HTTP Response/Request, HTTPS, URL, Browser Architecture, E-mail Protocols, World Wide Web, DNS. HTML – Basics, Program Structure, Headings, Paragraph, Styling, Formatting, Hyperlink, Image, Table, List, Frame, Block, Entities, Form, Form Elements, Introduction to XHTML. CSS – Types, Selector, Colors, Background, Box Model, Text, Font, Display, Position, Float, Clear, Rounded Corners. UNIT – II JavaScript – Basics, Features, Advantages, Limitations, Types, Basics, Functions, Control Statement, Arrays, JavaScript Objects, Host Objects. DOM – Introduction, Methods, Accessing HTML and CSS, Events, Event Listener, Nodes and Collection. BOM – Window,

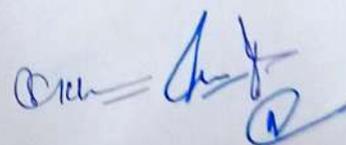|		
	server (Textual and XML form), Basics of JQuery. Introduction to REST UNIT IV Hosting - Overview of Domain, Hosting, SSL Certificates and steps to host a website. Introduction to Emerging Web Technologies - Introduction to Chatbot, Artificial Intelligence and Machine Learning basics used in websites.	Screen, History, Navigation. UNIT – III ES6 – Variables, Arrow functions, Class and Inheritance. Introduction to React - Render HTML, JSX. React Components – Web component, Class, Function, Constructor, nested Component. UNIT IV Data Handling – Props, Props Validation, State, Fetching Data through API. Lifecycle of React Components, Form Handling in React, Event Handling in React, React Sass.
Bachelor of Science (Information Technology) Semester- VI COURSE CODE: BITL–6112 DIGITAL MARKETING *** New Course Introduced instead of SOFTWARE ENGINEERING	New Course introduced	
Bachelor of Science (Information Technology) Semester – VI COURSE CODE: BITP - 6114 PROJECT	1. Candidates have to submit one hard copy and two CDs/DVDs of documentation which shall be kept with the HoD in the college only. Further, supervisor/guide shall forward one copy of DVD containing all the documentation files of the students (file name to be saved as Rollno_of_the_ student.pdf) to the COE Office. The Covering letter (duly signed by the guide and Head of the department) should	2. The soft copy of the module shall be submitted to the College/Institute till April 5 of the respective semester. 3. The software module shall be developed in groups, consisting of at most two students in a group. 4. The respective college shall depute guide(s)/supervisor(s) under whose supervision the software module shall be developed. The guide/supervisor shall clarify that the work done is original & authenticated. The

		contain the following information. Candidate name, Roll no, Project Title of the student and .pdf file name of her project documentation.	certificate found to be incorrect at any stage shall attract the proceedings against all the stakeholders, as per rules.
		2. The software module / website may be developed in groups, consisting of at most two students in a group.	
		3. The college shall depute guide(s)/supervisor(s) under whose supervision the software module shall be developed. The guide/supervisor shall clarify that the work done is original and authenticated. The certificate found to be incorrect at any stage shall attract the proceedings against all the stakeholders, as per rules.	

(Approved syllabus attached herewith as Annexure C-2)

The proposed syllabus and course outcomes of **Master of Science (Computer Science) Semester III - IV** under continuous evaluation system for the session 2022-23 was discussed by Board members and they approved the Syllabus with following changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted
Master of Science (Computer Science) Semester III / MCSL-4111 / Advanced Software Engineering	**UNIT I** **Software Quality Assurance Concepts and Standards:** Quality Concepts, Quality Control, Quality Assurance, SQA Activities, Software Reviews, Formal Technical Reviews, Review Guidelines, Software Reliability, Software Safety, Quality	**UNIT I** **Software Project Management:** Fundamentals of Software project planning, Conventional Software Management, Evolution of Software Economics, Improvement of Software Economics, Comparison of old and modern ways of Software Management.

Assurance Standards, ISO 9000, ISO 9001:2000, CMM, TQM, Six Sigma, SPICE, Software Quality Assurance Metrics.

UNIT II

Risk Management and Change Management: Software Risks, Risk Identification, Risk Projection, Risk Refinement, The RMMM Plan, Software Configuration Management, Baselines, Software Configuration Items, SCM Process: Version Control, Change Control, Configuration Audit.

UNIT III

Introduction to UML: Conceptual model of UML, building blocks of UML, Mechanisms in UML

Basic Structural Modelling: Classes, relationships, common mechanisms, class and object diagrams.

Advanced structural Modelling: Advanced classes, advanced relationships, Interfaces types and roles, packages, instances and object diagrams.

UNIT II

Software Re-engineering: Introduction Re-engineering, Restructuring and Reverse Engineering, Re-engineering existing systems, Data Re-engineering and migration, Software Reuse and Re-engineering.

UNIT III

Object-Oriented (OO) Measurements: Introduction, Why metrics, Classification of OO metrics, Study of Design Metrics- method size, method internals, class size, class inheritance, Method inheritance, class intervals and class externals.

UNIT IV

Object-Oriented Analysis and Design: What is Object-Oriented Design, Object, Abstraction, Collaboration among Objects, Polymorphism, Classes, specifying State, Specifying Behaviour, Class Relationships, Grouping, Hiding.

Software Agents: Definition, Applications, Types and Classes, Multi-Agent systems, characteristics & Properties Agents.

	UNIT IV	
	Basic behavioral modelling: Interactions, use cases, Use Case Diagrams, Interaction Diagrams and activity diagrams. **Advanced behavioural modelling**: Events and signals, state machines, process and threads, time and space, state chart diagrams. **Diagrams:** Collaboration Diagrams and Sequence Diagrams. Component and Deployment Diagrams.	

(Approved syllabus attached herewith as Annexure C-3)

The proposed syllabus and course outcomes of **Master of Science (Information and Network Security) Semester III - IV** under continuous evaluation system for the session 2022-23 was discussed by Board members and they approved the Syllabus.
(Approved syllabus attached herewith as Annexure C-4)

The house approved the Item: Comp. Sc. 7: 2022:4

<u>**Item: Comp. Sc. 7: 2022:5**</u>

To discuss the syllabi of the Diploma class for the session 2022-23 under Continuous Evaluation system.
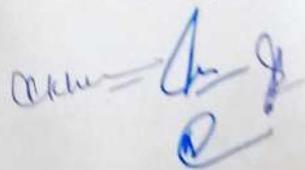
- Diploma in Computer Applications Semester I - II   **(Annexure D)**

Proceedings:

The proposed syllabus and course outcomes of Diploma in Computer Applications Semester I-II under continuous evaluation system for the session 2022-23 was discussed by Board members and they approved the Syllabus with following changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted

Diploma in Computer Applications Semester – II COURSE CODE: DCAM - 2112 PC COMPUTING– II(Professional DTP)	**UNIT I** Photoshop Tools:Marquee Tool, Move Tool, Lasso Tool (Polygon, Magnetic, Magic Wand Tool), Crop Tool, Healing Brush Tool, Patch Tool, Brush Tool, Pencil Tool, Clone Stamp Tool, Pattern Stamp Tool, History Brush Tool, Eraser Tool (Background, Magic Erases Tool), Gradient Tool, Blur Tool, Smudge tool, Sharpen Tool, Dodge Tool, Burn tool, Sponge tool Path Selection Tool, Text Type Tool, Pen Tool, Rectangle Tool, Eyedropper Tool, Hand Tool, Zoom Tool. **UNIT II** Color Modes (Grayscale, RGB, CMYK), Paths (Creating Paths via Selections, via Pen Tools), Concept of Layers, Creating/ Adding Layers, Duplicating Layer, Deleting Layer, Layers Palette Menu, Quick & Layer Mask. Filters, Transformation (Scaling, Rotating, Skewing, Distorting, Perspective, Flipping, Absolute, Free Transform). **UNIT III** Corel Draw: Exploring CorelDraw, Menus, Corel Tools (Pick Tool, Zoom Tool, Pan Tool, Rectangle Tool, Ellipse Tool Polygon Tool, Spiral, Graph Paper Tool, Shapes Tool, eraser tool, Free hand, Bezier, artistic Media Tool, Pen Tool) **UNIT IV**	**UNIT II** Photoshop Tools: Marquee Tool, Move Tool , Lasso Tool (Polygon, Magnetic, Magic Wand Tool), Crop Tool ,Healing Brush Tool ,Patch Tool, Brush Tool, Pencil Tool, Clone Stamp Tool, Pattern Stamp Tool, History Brush Tool, Art History Brush, Eraser Tool (Background, Magic Erases Tool), Gradient Tool , Blur Tool , Smudge Tool, Sharpen Tool, Dodge Tool, Burn Tool, Sponge Tool Path Selection Tool , Text Type Tool , Pen Tool ,Rectangle Tool , Eyedropper Tool, Hand Tool, Zoom Tool. **UNIT–III** Modes: Color Modes (Grayscale, RGB, CMYK), Channels and Paths (Creating Paths via Selections, via Pen Tools), Concept of Layers, Creating/ Adding Layers, Duplicating Layer, Deleting Layer, Layers Palette Menu, Quick & Layer Mask and Histogram. UNIT-IV Effects: Filters, Transformation (Scaling, Rotating, Skewing, Distorting, Perspective, Flipping, Absolute, Free Transform).

| | Grouping/Ungrouping Objects, Locking/Unlocking Objects, Trimming, Wielding, Intersection of Objects, Working with text, Fill Tool (Uniform, Fountain, Pattern, Texture, Postscript) Special Effects (Interactive blend tool, Contour Tool Distortion, Envelope, Extrude, Drop Shadow tool, Transparency Tool), Transformations (Position, Rotate, Scale, Size, Mirror). | |

(Approved syllabus attached herewith as Annexure D)

The house approved the Item: Comp. Sc. 7: 2022:5

<u>**Item: Comp. Sc. 7: 2022:6**</u>

To discuss the syllabus of additional / optional paper for Specialization subject of B.Sc. (IT) Semester I - VI for the session 2022-23under Continuous Evaluation System.

(Annexure E)

Proceedings:
The proposed syllabus and course outcomes of additional / optional paper for Specialization subject of Bachelor of Science (Information Technology) Semester I – VI under continuous evaluation system for the session 2022-23 was discussed by Board members and they approved the Syllabus with following changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted
Bachelor of Science (Information Technology) Semester- I COURSE CODE: BITL–1116 COMPUTATIONAL DATA SCIENCE	UNIT IV Measures of Central Tendency: Mean, Median and Mode	UNIT I Challenges in Data Science UNIT IV Probability Basics: Definition, Events, Properties of Probability.
Bachelor of Science (Information Technology)	UNIT I Probability: Meaning, Basic	UNIT – II Introduction to Asymmetry: Moments,

Semester- II COURSE CODE: BITL–2116 STATISTICAL TECHNIQUES FOR DATA SCIENCE	concepts, Events, Properties of Probability. UNIT II Probability: Conditional Probability, Addition Theorem, Multiplication Theorem and Bayes' Theorem. UNIT III Introduction to Asymmetry: Moments, Kurtosis and Skewness UNIT IV ANOVA - one way and two way.	Kurtosis and Skewness UNIT III ANOVA - one way and two way. UNIT - IV Probability: Meaning, Introduction to Marginal Probability, Conditional Probability and Bayes Theorem.
Bachelor of Science (Information Technology) Semester IV COURSE CODE: BITM–4118 FOUNDATION OF STATISTICAL COMPUTING **Course Code Change BITP-4117 to BITP-4118**	No change in contents	

(Approved syllabus attached herewith as Annexure E)

The house approved the Item: Comp. Sc. 7: 2022:6

<u>Item: Comp. Sc. 7: 2022:7</u>

To discuss the syllabi of Computer Science / Applications as an elective subject for the session 2022-23 under Continuous Evaluation System.

- Bachelor of Arts/ Bachelor of Science - Computer Science Semester I - VI

(Annexure F-1)

- Bachelor of Arts/ Bachelor of Science - Computer Applications (Vocational) Semester I – VI

(Annexure F-2)

Proceedings:

The proposed syllabus and course outcomes of **Bachelor of Arts / Bachelor of Science –
Computer Science Semester I – VI** under continuous evaluation system for the session 2022-23
was discussed by Board members and they approved the Syllabus with following changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted
Bachelor of Arts / Bachelor of Science (Computer Science) /Bachelor of Science (Economics) Semester- II Course Code: BARM-2134 BCSM-2134 BECM-2134 COMPUTER SCIENCE (PROGRAMMING IN C) (THEORY)	UNIT I ASCII Codes	UNIT I Codes, Problem Analysis, decision tables,

(Approved syllabus attached herewith as Annexure F-1)

The proposed syllabus and course outcomes of **Bachelor of Arts/ Bachelor of Science -
Computer Applications (Vocational) Semester I – VI**under continuous evaluation system for the
session 2022-23 was discussed by Board members and they approved the Syllabus with following
changes:

Program Name / Course code / Name of the Course	Content Added	Content Deleted
Bachelor of Arts / Bachelor of Science(Economics) Semester II COURSE CODE: BARM-2124 / BECM-2124 COMPUTER APPLICATIONS (VOCATIONAL) (PROGRAMMING IN C) (THEORY)	UNIT I ASCII Codes	UNIT I Problem Analysis, decision tables,

| Bachelor of Arts / Bachelor of Science(Economics) Semester III

COURSE CODE: BARM-3124 / BECM-3124

COMPUTER APPLICATIONS (VOCATIONAL)

(OPERATING SYSTEM)

(THEORY) | UNIT-II

CPU Scheduling:Basic concepts, Scheduling Algorithms, Algorithm, Evaluation:Turnaround Time, Waiting Time.

Introduction to File Management, I/O Device Management, Data Management

UNIT–IV

Linux: Introduction, Features, Architecture of Linux (Kernel, Shell)
Linux Commands: cp, ls, mkdir, mv, rmdir, rm,mv, sort, ln
Introduction to Vi Editor commands: opening, inserting,modifying, deleting and saving files. | UNIT II

CPU Scheduling: First come First serve, Shortest Job First, Priority, Round Robin Scheduling.

UNIT–IV

Linux: History

Linux Commands: curl, etc. |

(Approved syllabus attached herewith as Annexure F-2)

The house approved the Item: Comp. Sc. 7: 2022:7

Item: Comp. Sc. 7: 2022:8

To discuss the syllabi of following courses/programmes - as a subject for inter departmental courses for the session 2022-23 under Continuous Evaluation System.

- ID Course – Basics of Computer Applications as choice-based course for PG students of other disciplines (Credit based Continuous Evaluation Grading System) **(Annexure G-1)**

- Bachelor of Commerce (Hons) Semester I (Workshop on Office Package) **(Annexure G-2)**

- Bachelor of Business Administration Semester I (Computer Applications for Business - I) **(Annexure G-3)**

- Bachelor of Commerce (Pass) Semester I (Computer Fundamentals) **(Annexure G-4)**

- Bachelor of Science (Fashion Designing) Semester I (Basics of Computer) **(Annexure G-5)**

- Bachelor of Science (Hons) Physics Semester III (Python **(Annexure G-6)**

Programming)

- Bachelor of Science (Home Science) Semester I (Computer Basics) & Semester II (Computer Applications for Home Scientists)   **(Annexure G-7)**

- Bachelor of Science (Hons) Mathematics Semester II (Computer Fundamentals and Introduction to C), Semester III (Python Programming) & Semester IV (Foundation of Statistical Computing)   **(Annexure G-8)**

Proceedings:

The syllabi of Computer as a subject for the said inter departmental courses for the session 2022-23 were discussed. It was suggested by BOS members to shorten the contents of newly created ID course - Basics of Computer Applications as choice-based course for PG students of other disciplines, rest of the syllabi were approved.

The house approved the Item: Comp. Sc. 7: 2022:8

Item: Comp. Sc. 7: 2022:9

To discuss the syllabi of following courses/programmesas a subject for inter departmental PG courses for the session 2022-23 under Credit Based Continuous Evaluation Grading System:

- Master of Commerce Semester IV (E-Commerce)

    (Annexure H-1)

- Master of Science (Chemistry) Semester I (Computer for Chemists)   (Annexure H-2)

- Master of Science (Zoology) Semester I (Computer Programming and Data Processing)   (Annexure H-3)

- Master of Arts (Economics) Semester II (Computer Applications for Economists)   (Annexure H-4)

Proceedings:
The syllabi were discussed and approved.

The house approved the Item: Comp. Sc. 7: 2022:9

Item: Comp. Sc. 7: 2022:10

To discuss the syllabi of two new Certificate Courses to be offered (for the first time) for the session 2022-23:

- Data Management and Care   **(Annexure I-1)**
- Native App Development using Kotlin Android   **(Annexure I-2)**

Proceedings:

1. It was suggested to give 10 marks weightage for MCQ based paper and 40 marks for competency Based Test for both the courses.
2. It was recommended to add 10+2 class passed candidates under eligibility criteria for both the courses.

(Approved syllabus attached herewith as Annexure I-1 and Annexure I-2)

The house approved the Item: Comp. Sc. 7: 2022:10

Item: Comp. Sc. 7: 2022:11

To intimate the BOS members about the existing teaching methodologies and innovative methods followed like use of ICT tools, e-content, presentations, video lectures and Learning Management System (LMS) etc. and to seek their suggestions for further improvement.

Proceedings:

BOS members were happy with the methodologies and techniques followed by the faculty for teaching. They appreciated the faculty for undertaking research projects and motivated them to promote the research aptitude.

(Annexure J)

The house approved the Item: Comp. Sc. 7: 2022:11

Item: Comp. Sc. 7: 2022:12

To discuss the outcome of all the above stated courses and programs.

Proceedings:

Program wise outcomes were discussed and approved by the members of Board of Studies.

The house approved the Item: Comp. Sc. 7: 2022:12

Item: Comp. Sc. 7: 2022:13

To discuss the list of proposed examiners and evaluators for Semester I-VI for all the Computer classes/Subjects for Session 2022-23
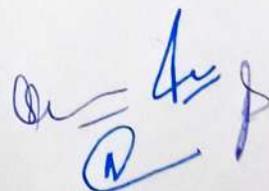
Proceedings:

List of Paper Setters and evaluators was approved by the members of Board of Studies.

(Annexure K)

The house approved the Item: Comp. Sc. 7: 2022:13

Item: Comp. Sc. 7: 2022:14

To discuss the activities and plans of department for the Academic session 2022-23.

Proceedings:

BOS members were intimated about the proposed activities and plans of department for the Academic session 2022-23. The members praised the team and encouraged them to continue the efforts for the betterment of the students.

The house approved the Item: Comp. Sc. 7: 2022:14

The meeting ended with vote of thanks by Ms. Suman Khurana, she said that the department is working well due to the excellent team work, she has full faith in her team for prospective growth of the department under Autonomous status. She also thanked all the External Members of Board of Studies for their valuable inputs and for sparing their precious time for the meeting.

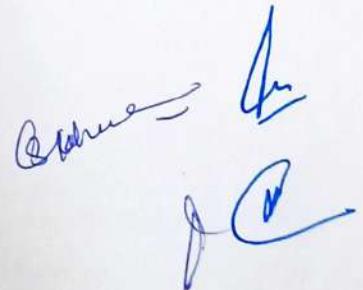Dr. Munish Saini   Dr. Maninder Singh   Dr. Harsh Verma

(VC Nominee)   (Outside GNDU Nominee)   (Outside GNDU Nominee)

Mr. Abhay Goswami   Dr. Manisha Malhotra

(Industry Expert)   (Alumni Member)

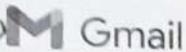**M** Gmail   Suman Khurana <kmvskhurana1@gmail.com>

Re: Revised Proceedings of BOS Meeting and Revised Files
4 messages

Munish Saini <munish.cet@gndu.ac.in>   Fri, May 6, 2022 at 9:11 AM
To: Suman Khurana <kmvskhurana@gmail.com>

approved

On Thu, May 5, 2022 at 2:26 PM Suman Khurana <kmvskhurana@gmail.com> wrote:

> Dear Sir /Madam,
>
> Greetings of the Day !!
>
> PFA the revised Proceedings of BOS Meeting and revised syllabi files - meeting held on April 21_2022 . We are thankful to you
> for your sincere efforts .
> You are requested to give approval as soon as possible , so that further line of action for the Academic Council Meeting may begin.
>
> Thanks a lot.
>
>
> Best Regards
> Suman Khurana
> KMV,Jalandhar
>
>
> --
> Dr. Munish Saini
> Assistant Professor
> Department of Computer Engineering and Technology
> Guru Nanak Dev University,
> Amritsar, Punjab (INDIA) -143005
> (M) +91-9988285687
> E-mail: munish_1_saini@yahoo.co.in, munish.cet@gndu.ac.in

Dr Harsh Verma <vermah@nitj.ac.in>   Mon, May 9, 2022 at 6:25 PM
To: Suman Khurana <kmvskhurana@gmail.com>

Dear Madam,

I hereby approve the revised proceedings of BOS.

Dr Harsh Verma
[Quoted text hidden]

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manisha malhotra <manishavermamalhotra@gmail.com>   Mon, May 9, 2022 at 6:36 PM
To: Suman Khurana <kmvskhurana@gmail.com>
Cc: Abhay Goswami <abhay@ajayind.com>, Dr Harsh Verma <vermah@nitj.ac.in>, Maninder Singh <msingh@thapar.edu>, Munish
Saini <munish.cet@gndu.ac.in>

Acknowledged.
[Quoted text hidden]
--
LinkedIn Profile
Regards,
Manisha Malhotra
9417976798

Maninder Singh <msingh@thapar.edu>   Tue, May 10, 2022 at 9:54 AM
To: Suman Khurana <kmvskhurana@gmail.com>
Cc: manisha malhotra <manishavermamalhotra@gmail.com>, Munish Saini <munish.cet@gndu.ac.in>, Dr Harsh Verma
<vermah@nitj.ac.in>, Abhay Goswami <abhay@ajayind.com>

Recommended to take it forward.

Regards
MSingh