



SCHOOL OF ENGINEERING & TECHNOLOGY

COURSE FILE

Program: Computer Science Engineering

Course Code: CSC1234

Course Title: Blockchain

Module Semester: VI

Session: 2021-20

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1. Course Details

- **Course Code:** CSC1234
- **Course Title:** Blockchain
- **Module/Semester:** VI
- **Session:** 2021-20

2. Vision, Mission of the University

Vision

BML Munjal University seeks to nurture ethical leaders who are skilled, knowledgeable and have the life skills required for leading their organizations to success. The university shall seek the advancement and dissemination of practically oriented knowledge benchmarked with the best global standards.

Mission

BML Munjal University aims to be a leading university for the quality and impact of its teaching, research and linkages with major stakeholders. The focus of the university is to find creative solutions to problems through application of knowledge. The university aims to create a talented community of students and faculty who excel in teaching, learning and research, in a creative and stimulating environment. The university will collaborate with other institutions for development of science, technology and arts in the global context.

3. Graduate Attributes

- Acquire and apply practical understanding of discipline knowledge.
- Demonstrate a sense of ethics and display excellence in both personal and professional life.
- Exhibit problem solving, critical thinking skills and investigative capability to address real world problems.
- Manifest leadership qualities and work effectively in teams across globally diverse environments.
- Be a lifelong learner with an entrepreneurial mindset to innovate in the constantly changing global scenario.
- Possess a strong sense of inquiry and design innovative solutions for positive societal impact.
- Be effective communicators and possess an empathetic outlook.

4. Vision, Mission of the School

Vision of School:

To be amongst the leading engineering schools of the country recognized globally for excellence in teaching and research with focus on experiential learning, innovation and entrepreneurship.

Mission of School:

Providing high-quality learning experience to our students, preparing them to be global leaders, and contributing to the development of society through research, innovation, and entrepreneurship.

Creating an inclusive and diverse learning environment that fosters creativity, critical thinking, and ethical values.

Collaborating with industry, government, and other institutions to address complex societal challenges and promote sustainable development.

5. PEOs and POs & PSOs of the Program

Program Educational Objectives (PEO):

PEO 1: Identify real-life problems and develop creative and innovative hardware/software-based solutions.

PEO 2: Achieve professional development through self-learning to adapt to the technological changes in the ever changing field of computing.

PEO 3: Engage in life-long learning of computer engineering technologies, critical thinking and continuous ingenuity and apply them in real-life applications.

PEO 4: Accomplish leadership roles by imbibing ethics and professionalism with emphasis on sustainable development of the society.

Program Outcomes (PO):

PO1: Apply the foundational concepts of mathematics, science and computer engineering to find novel solutions for complex real-life engineering problems.

PO2: Identify, formulate, review literature and analyze complex computer engineering problems reaching substantiated conclusions and derive a coherent logic that can be implemented by computers.

PO3: Design analytical and computational models for solving complex engineering problems giving due consideration to issues related to public health and safety, cultural and societal constraints, and environmental concerns.

PO4: Use research-based knowledge, methods, tools and techniques for data collection, designing digital computing systems, analyzing and interpreting the results to provide substantiated conclusions.

PO5: Use appropriate tools to model complex computer engineering problems through identification of the limitations and creating solutions to predict the real-world phenomena.

PO6: Use appropriate contextual knowledge of computer engineering to review and assess societal, health, legal, cultural, safety and contemporary issues and rationalize the ensuing responsibilities towards the society.

PO7: Adopt computer engineering practices in congruence with societal need, understand the working practices and its impact on natural resources for sustainable development.

PO8: Use ethical principles to pursue excellence in developing computer engineering systems and behave appropriately to develop a reliable and trustworthy relationship with others.

PO9: Function effectively as a reliable and responsible individual, and as a member or leader in diverse computer engineering teams, and in multidisciplinary settings, thereby placing team goals ahead of individual interests.

PO10: Communicate effectively by capturing the desirable computer system requirements for preparation of specification documents, write clear and concise report such as laboratory files, research papers, thesis, and presentation materials.

PO11: Demonstrate knowledge of computer engineering and management principles for the completion of individual or group projects in multidisciplinary environments.

PO12: Recognize the evolving technological changes and engage as an independent and life-long learner

in both computing and non-computing fields.

Program Specific Outcomes (PSO):

PSO1: Identify applicable tools and techniques related to data science practice such as data collection, cleaning, analysis, modelling, evaluation and result interpretation and apply them for deriving hidden and meaningful patterns for appropriate actionable insights.

PSO2: Develop intelligent systems for various real-life domains like healthcare, transportation, finance etc. using Artificial Intelligence methodologies.

PSO3: Understand the foundational concepts and techniques to protect computing systems against constantly evolving cybersecurity threats and analyze security breaches and violations of cyber systems and networks to provide appropriate solutions.

PSO4: Design effective security systems to mitigate risks, threats and vulnerabilities for protecting the organizations against cyber threats.

6. Course Description and its objectives

BML Munjal University seeks to nurture ethical leaders who are skilled, knowledgeable and have the life skills required for leading their organizations to success. The university shall seek the advancement and dissemination of practically oriented knowledge benchmarked with the best global standards. BML Munjal University aims to be a leading university for the quality and impact of its teaching, research and linkages with major stakeholders. The focus of the university is to find creative solutions to problems through application of knowledge. The university aims to create a talented community of students and faculty who excel in teaching, learning and research, in a creative and stimulating environment. The university will collaborate with other institutions for development of science, technology and arts in the global context.

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7. Course Outcomes and CO-PO Mapping

Course Outcomes:

CO1:

CO/PO Mapping:

Course Outcomes (CO)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

8. Detailed Session wise Plan & Course Syllabus

Sr. No.	Content	CO	Sessions
1	Topic Name with Details	1	1

Learning Resources

Text Books:

Reference Links:

9. Weekly Timetable

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:15-10:10					
10:15-11:10					
11:15-12:10					
12:15-13:10					
13:15-14:10					
14:15-15:10					
15:15-16:10					
16:15-17:10					
17:15-18:10					

10. Registered Students List

Sr.No	Unique Id.	Student Name
1	230506	Parul Gupta
2	230508	Vaishnavi Singh s
3	230509	Sanyam Jain
4	230510	Pamoti Sai Kumar
5	230512	Shrey Jaiswal
6	230513	Rakshit Chauhan
7	230515	Harshit Khurana
8	230516	Asad Ahmad
9	230517	Ayush Yadav
10	230518	Harsh Pratap Singh
11	230519	Vivek Yadav
12	230520	Sourabh Khatana
13	230521	Ankit Kumar
14	230522	Aditya Parecha
15	230524	Dhiren
16	230525	Anuj Pratap Singh
17	230526	Kartik Kotnala
18	230527	Drishti
19	230528	Abhinav Singh
20	230529	Jai Vardhan Vajpai
21	230530	Himanshu Yadav
22	230532	Dhruv Jain
23	230533	Paarth
24	230534	Muskan Patni
25	230535	Karanveer Singh
26	230537	Naman Agarwal
27	230538	Jhankar Bansal
28	230539	Priyanshu Singh
29	230540	Parul Aggarwal
30	230541	Prathmesh Kumar Ojha
31	230542	Tushar Gupta
32	230545	Sahil Mahadev Mane
33	230546	Arpita Bansal
34	230547	Suhani Aggarwal
35	230548	Keshav
36	230549	Rajat
37	230550	Shashwat Gaur
38	230551	Kanishk Gupta
39	230552	Aastha Thakur
40	230553	Mayank Gupta
41	230554	Mihir Katoch
42	230555	Kislay Kumar
43	230556	Ayush Singh
44	230557	Putta Abhiram
45	230558	Hemant Goyal
46	230645	Apoorva Srivastava
47	230787	Tanya .
48	230794	Ansh Rohilla

11. Details of Internal Assessment, weightages and remarks

Component	Weightage	Evaluationweek	Remarks
324234fdvdf	342	r4	343

12. Mid-Semester/ Internal Assessment Question papers with sample solutions

Error processing sample submissions

15. Interventions made for Low performers and advanced learners, highlighting initiatives taken for student improvements (retest, resubmissions etc.)

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17. Details of Marks in all components up to the End Semester including the grades

Sr.No	Unique Id.	Student Name	End term examination Out of (40)	Project Evaluation Out of (60)	Grading
1	230506	Parul Gupta	36.0	38.0	A
2	230508	Vaishnavi Singh s	31.0	36.0	B+
3	230509	Sanyam Jain	33.0	30.5	B
4	230510	Pamoti Sai Kumar	37.0	46.25	A+
5	230512	Shrey Jaiswal	37.0	47.5	A+
6	230513	Rakshit Chauhan	26.0	29.25	C+
7	230515	Harshit Khurana	31.0	36.75	B+
8	230516	Asad Ahmad	31.0	39.25	B+
9	230517	Ayush Yadav	26.0	32.0	C+
10	230518	Harsh Pratap Singh	20.0	29.25	C
11	230519	Vivek Yadav	15.0	27.0	D
12	230520	Sourabh Khatana	15.0	29.5	D
13	230521	Ankit Kumar	26.0	32.25	B
14	230522	Aditya Parecha	26.0	40.25	B+
15	230524	Dhiren	15.0	39.0	C
16	230525	Anuj Pratap Singh	29.0	36.0	B
17	230526	Kartik Kotnala	37.0	46.25	A+
18	230527	Drishti	36.0	38.25	A
19	230528	Abhinav Singh	26.0	29.25	C+
20	230529	Jai Vardhan Vajpai	20.0	37.25	C+
21	230530	Himanshu Yadav	15.0	39.0	C
22	230532	Dhruv Jain	0.0	13.75	R
23	230533	Paarth	26.0	34.25	B
24	230534	Muskan Patni	36.0	36.0	B+
25	230535	Karanveer Singh	26.0	39.0	B
26	230537	Naman Agarwal	20.0	33.5	C
27	230538	Jhankar Bansal	37.0	37.0	A

28	230539	Priyanshu Singh	26.0	34.0	B
29	230540	Parul Aggarwal	36.0	37.75	A
30	230541	Prathmesh Kumar Ojha	37.0	46.25	A+
31	230542	Tushar Gupta	26.0	28.5	C+
32	230545	Sahil Mahadev Mane	26.0	38.0	B
33	230546	Arpita Bansal	36.0	37.5	A
34	230547	Suhani Aggarwal	35.0	36.5	B+
35	230548	Keshav	26.0	29.0	C+
36	230549	Rajat	26.0	29.5	C+
37	230550	Shashwat Gaur	37.0	46.25	A+
38	230551	Kanishk Gupta	36.0	39.5	A
39	230552	Aastha Thakur	36.0	38.25	A
40	230553	Mayank Gupta	37.0	40.0	A
41	230554	Mihir Katoch	23.0	35.25	B
42	230555	Kislay Kumar	29.0	33.25	B
43	230556	Ayush Singh	29.0	35.0	B
44	230557	Putta Abhiram	37.0	46.25	A+
45	230558	Hemant Goyal	26.0	38.0	B
46	230645	Apoorva Srivastava	29.0	38.25	B+
47	230787	Tanya .	20.0	34.25	C+
48	230794	Ansh Rohilla	26.0	32.0	C+

18. Identification of advance learners and low performers conducted at the end of the semester

Learner Categories Summary

Learner Category	Number of Students
Advanced Learners	0
Medium Learners	48
Slow Learners	0

Student Learning Classification

Student Name	Category
Parul Gupta	Medium Learner
Vaishnavi Singh s	Medium Learner
Sanyam Jain	Medium Learner
Pamoti Sai Kumar	Medium Learner
Shrey Jaiswal	Medium Learner
Rakshit Chauhan	Medium Learner
Harshit Khurana	Medium Learner
Asad Ahmad	Medium Learner
Ayush Yadav	Medium Learner
Harsh Pratap Singh	Medium Learner
Vivek Yadav	Medium Learner
Sourabh Khatana	Medium Learner
Ankit Kumar	Medium Learner
Aditya Parecha	Medium Learner
Dhiren	Medium Learner
Anuj Pratap Singh	Medium Learner
Kartik Kotnala	Medium Learner
Drishti	Medium Learner
Abhinav Singh	Medium Learner
Jai Vardhan Vajpai	Medium Learner
Himanshu Yadav	Medium Learner
Dhruv Jain	Medium Learner
Paarth	Medium Learner
Muskan Patni	Medium Learner
Karanveer Singh	Medium Learner
Naman Agarwal	Medium Learner
Jhankar Bansal	Medium Learner
Priyanshu Singh	Medium Learner
Parul Aggarwal	Medium Learner
Prathmesh Kumar Ojha	Medium Learner
Tushar Gupta	Medium Learner
Sahil Mahadev Mane	Medium Learner
Arpita Bansal	Medium Learner
Suhani Aggarwal	Medium Learner
Keshav	Medium Learner
Rajat	Medium Learner
Shashwat Gaur	Medium Learner
Kanishk Gupta	Medium Learner
Aastha Thakur	Medium Learner
Mayank Gupta	Medium Learner

Mihir Katoch	Medium Learner
Kislay Kumar	Medium Learner
Ayush Singh	Medium Learner
Putta Abhiram	Medium Learner
Hemant Goyal	Medium Learner
Apoorva Srivastava	Medium Learner
Tanya .	Medium Learner
Ansh Rohilla	Medium Learner

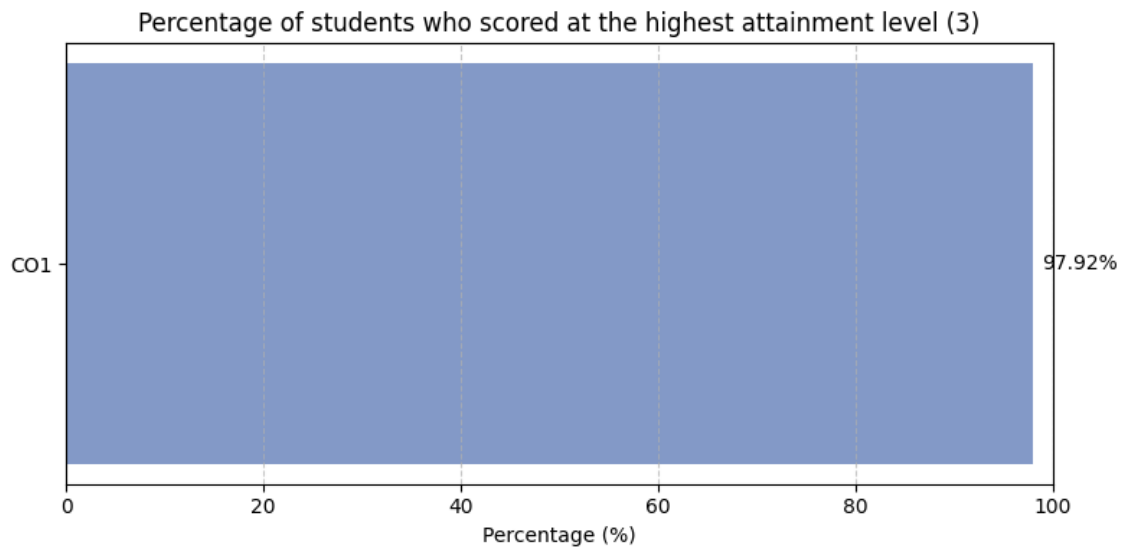
19. Attendance Report

Sr.No	Unique Id.	Student Name	Attendance
1	230506	Parul Gupta	88.00
2	230508	Vaishnavi Singh s	80.00
3	230509	Sanyam Jain	82.61
4	230510	Pamoti Sai Kumar	92.00
5	230512	Shrey Jaiswal	76.00
6	230513	Rakshit Chauhan	48.00
7	230515	Harshit Khurana	84.00
8	230516	Asad Ahmad	88.00
9	230517	Ayush Yadav	84.00
10	230518	Harsh Pratap Singh	86.36
11	230519	Vivek Yadav	76.00
12	230520	Sourabh Khatana	84.00
13	230521	Ankit Kumar	76.00
14	230522	Aditya Parecha	76.00
15	230524	Dhiren	76.00
16	230525	Anuj Pratap Singh	76.00
17	230526	Kartik Kotnala	80.00
18	230527	Drishti	76.00
19	230528	Abhinav Singh	76.00
20	230529	Jai Vardhan Vajpai	76.00
21	230530	Himanshu Yadav	76.00
22	230532	Dhruv Jain	60.00
23	230533	Paarth	92.00
24	230534	Muskan Patni	88.00
25	230535	Karanveer Singh	96.00
26	230537	Naman Agarwal	76.00
27	230538	Jhankar Bansal	84.00
28	230539	Priyanshu Singh	76.00
29	230540	Parul Aggarwal	80.00
30	230541	Prathmesh Kumar Ojha	88.00
31	230542	Tushar Gupta	84.00
32	230545	Sahil Mahadev Mane	80.00
33	230546	Arpita Bansal	76.00
34	230547	Suhani Aggarwal	92.00
35	230548	Keshav	76.00
36	230549	Rajat	76.00
37	230550	Shashwat Gaur	76.00
38	230551	Kanishk Gupta	88.00
39	230552	Aastha Thakur	84.00
40	230553	Mayank Gupta	88.00
41	230554	Mihir Katoch	92.00
42	230555	Kislay Kumar	76.00
43	230556	Ayush Singh	88.00
44	230557	Putta Abhiram	78.26
45	230558	Hemant Goyal	84.00
46	230645	Apoorva Srivastava	84.00
47	230787	Tanya .	80.00
48	230794	Ansh Rohilla	80.00

20. CO attainment analysis with the reflection on feedback on course outcomes

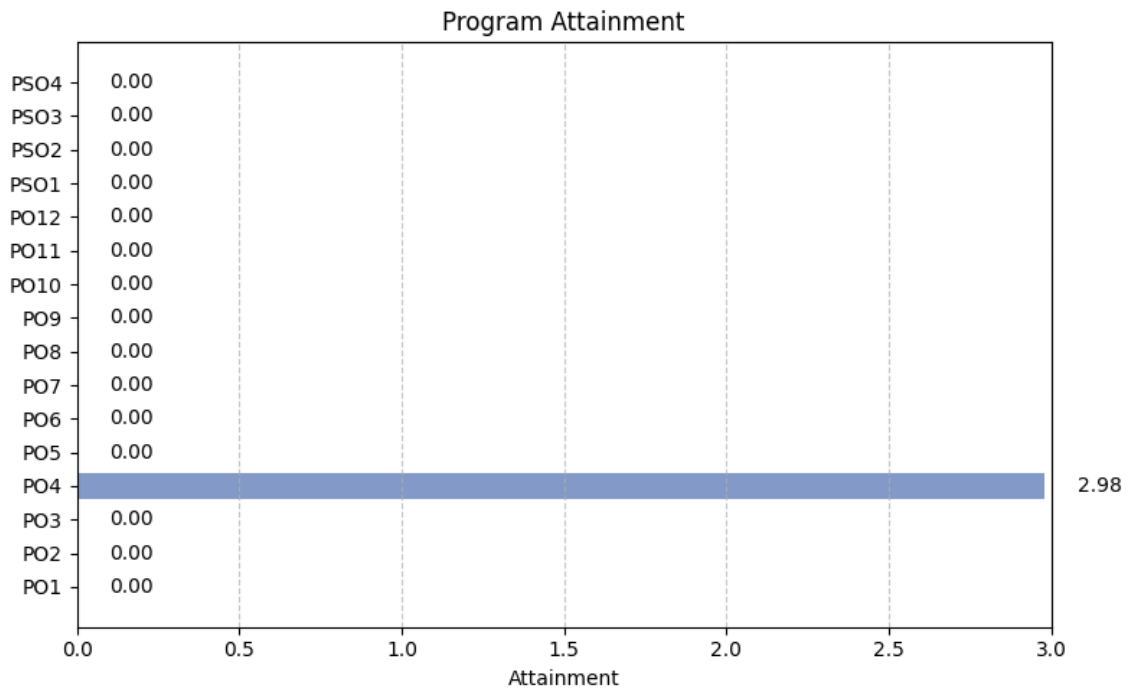
CO Attainment Summary

Course Outcomes	CO1
Weights	100.00%
No. of students who scored at the highest attainment level (3)	47
Percentage of students who scored at the highest attainment level (3)	97.92%
Attainment Level	3
Overall Course Attainment	3.0000



Program Attainment

Program Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
Program Attainment	0.00	0.00	0.00	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Student-wise CO Achievement

NAME	CO1 Score
Parul Gupta	3
Vaishnavi Singh s	3
Sanyam Jain	3
Pamoti Sai Kumar	3
Shrey Jaiswal	3
Rakshit Chauhan	3
Harshit Khurana	3
Asad Ahmad	3
Ayush Yadav	3
Harsh Pratap Singh	3
Vivek Yadav	3
Sourabh Khatana	3
Ankit Kumar	3
Aditya Parecha	3
Dhiren	3
Anuj Pratap Singh	3
Kartik Kotnala	3
Drishti	3
Abhinav Singh	3
Jai Vardhan Vajpai	3
Himanshu Yadav	3
Dhruv Jain	2
Paarth	3
Muskan Patni	3
Karanveer Singh	3
Naman Agarwal	3
Jhankar Bansal	3
Priyanshu Singh	3
Parul Aggarwal	3
Prathmesh Kumar Ojha	3
Tushar Gupta	3
Sahil Mahadev Mane	3
Arpita Bansal	3
Suhani Aggarwal	3
Keshav	3
Rajat	3
Shashwat Gaur	3
Kanishk Gupta	3
Aastha Thakur	3
Mayank Gupta	3
Mihir Katoch	3
Kislay Kumar	3
Ayush Singh	3
Putta Abhiram	3
Hemant Goyal	3
Apoorva Srivastava	3
Tanya .	3
Ansh Rohilla	3

Average	2.98
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21. Feedback (class committee or otherwise) and corrective actions (if any)

Quantitative Feedback:

Average Rating: 0.00/5