



# OFFICIAL TRANSCRIPT

**Name:** Bhumika Mittal  
**Enrolment ID:** 1020211063  
**Admission:** August 2021  
**Graduation:** May 2024

**Degree:** B.Sc. (Hons.) Computer Science  
**Degree CGPA:** 3.90  
**Major:** Computer Science  
**University Honours:** Summa Cum Laude

**Minor:** Mathematics  
**Minor:** Entrepreneurial Leadership and Strategy

Code	Course Title	Credits	Grade
<b>Monsoon 2021</b>			
CVA-0051	Making Interactive Art	2	A
FC-0309	Quantitative Reasoning and Mathematical Thinking: Foundations of Computer Programming	4	A
FC-0410	Economy, Politics and Society: Politics and Development	4	A-
FC-0701	Literature and the World	4	B+
MAT-1000	Calculus	4	A
<b>Credits Earned: 18</b>		<b>GPA: 3.78</b>	<b>CGPA: 3.78</b>
<b>Dean's List</b>			

<b>Summer 2022</b>			
FC-0201	Indian Civilisations	4	A
FC-0503	Mind and Behaviour	4	A
<b>Credits Earned: 8</b>		<b>GPA: 4.00</b>	<b>CGPA: 3.82</b>

Code	Course Title	Credits	Grade
<b>Spring 2022</b>			
CS-1101/ PHY-1101	Introduction to Computer Programming	4	A
CS-1104	Discrete Mathematics	4	A
CT-0001	Introduction to Critical Thinking	4	A-
ENT-2010	How to Start a Startup	4	B+
ENT-3008	Theory and Practice of Leadership	2	A-
FC-0601	Great Books	4	A
<b>Credits Earned: 22</b>		<b>GPA: 3.79</b>	<b>CGPA: 3.79</b>
<b>Dean's List</b>			

<b>Monsoon 2022</b>			
CLA-0038	Kath, Baath Te Baeth: Kashmiri	2	A
CS-1101/ PHY-1101	Introduction to Computer Programming	0	TP
CS-1203	Data Structures	4	A
CS-1216	Computer Organization and Systems	4	A
ENT-2017	Artificial Intelligence and Data Analytics	4	A
FC-0801	Principles of Science	4	A
MAT-2020/ CS-1209/ PHY-1208	Probability and Statistics	4	A
PHI-1060/ CS-2160	Symbolic Logic	0	AU
<b>Credits Earned: 22</b>		<b>GPA: 4.00</b>	<b>CGPA: 3.88</b>
<b>Dean's List</b>			



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Registrar Signature



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Code	Course Title	Credits	Grade
<b>Spring 2023</b>			
CS-1104	Discrete Mathematics	0	TP
CS-1205	Algorithm Design and Analysis	4	A
CS-1217	Operating Systems	4	A-
CS-1390	Introduction to Machine Learning	4	A-
CS-IS-3037	Security Engineering 1	0	AU
ENT-2024	Technology and Product Development	0	AU
ENT-2025	Strategy through Board Games	2	TP
MAT-1001/ CS-2210	Linear Algebra	4	A
MAT-1004	Multivariable Calculus	4	A-
<b>Credits Earned: 22      GPA: 3.82      CGPA: 3.86      Dean's List</b>			

<b>Monsoon 2023</b>			
CS-1203	Data Structures	0	TP
CS-1319	Programming Language Design and Implementation	4	A-
CS-1340	Computer Networks	4	A
CS-2361	Blockchain and Cryptocurrencies	4	A
ENT-2031	The Power Of Execution	2	A
FC-0102	Environmental Studies	4	A
MAT-2001/ CS-2250	Algebra 1	4	A
MAT-2003	Real Analysis	4	A-
<b>Credits Earned: 26      GPA: 3.91      CGPA: 3.88      Dean's List</b>			

Code	Course Title	Credits	Grade
<b>Summer 2023</b>			
ENT-IS-3003	Technology Strategies for Business Transformation	4	A
<b>Credits Earned: 4      GPA: 4.00      CGPA: 3.87</b>			

<b>Spring 2024</b>			
CS-1349	Theory of Computation	4	A
CS-2362	Computer Security and Privacy	4	A
CS-2366	An Introduction to Quantum Information, Computation and Cryptology	2	A
CS-IS-3060	Investigation of Dilithium: A Lattice-Based Post-Quantum Signature Scheme	4	A
ENT-1012	Essentials of Technology Product Management	2	A
ENT-2032/ POL-2120	Technology Law and Policy: A New Frontier for Business and Society	4	TP
MAT-4030/ CS-2403	Elliptic Curves and Cryptography	4	A
<b>Credits Earned: 24      GPA: 4.00      CGPA: 3.90      Dean's List</b>			

END OF TRANSCRIPT



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**TOTAL INSTITUTION CREDITS: 146**  
**TOTAL TRANSFER CREDITS: 0**  
**OVERALL CREDITS: 146**  
**Print Date: 24th May, 2024**

Registrar Signature





**ASHOKA**  
UNIVERSITY

## Ashoka University

Office of the Registrar

Address: Plot No.2, Rajiv Gandhi Education City,  
Rai 131029, Sonapat, Haryana, India

Ashoka University (Ashoka) is a multi-disciplinary, student-centric university offering a range of academic programmes at the undergraduate and postgraduate diploma levels.

Ashoka's multi-disciplinary curriculum provides students a strong foundation in disciplines in the humanities, social sciences and natural sciences, while enabling them to gain mastery of a subject of their choosing. Taught by world-class faculty, education at Ashoka is designed to develop students with the breadth of vision, knowledge, skills and attitudes required to succeed in the careers of the 21st century. The programmes at Ashoka bear the distinctive stamp of being interdisciplinary.

Located in Sonapat, Haryana, in India's National Capital Region, Ashoka University was established by the International Foundation for Research and Education (IFRE) in 2014 through Act no 21 of 2014 of State Legislature of Haryana as a State Private University.

## Accreditation

Ashoka has been approved by the University Grants Commission (UGC) and is competent to award degrees as specified by the UGC.

## Courses

For course descriptions see

<https://www.ashoka.edu.in/ug-academics>

A normal course load is 4-5 (4 credit) courses per semester. Introductory courses are numbered 1000-1999, intermediate courses 2000-2999, and advanced courses 3000-4999.

Foundation Courses (FCs) and the Introduction to Critical Thinking courses (ICT) carry 4 credits each.

## Degree Requirements

From the class of 2020 onwards, to graduate with a Bachelor's degree from Ashoka, students have to successfully complete at least the following, with an overall cumulative grade point

average (CGPA)  $\geq 1.67$ :

- 36 academic credits from FC/ICT requirements, of which eight credits must come from Environment Studies and ICT.
- A minimum of 48 academic credits from courses in a Pure Major and 96 academic credits overall, or a minimum of 64 academic credits from courses in an Interdisciplinary Major and 112 academic credits overall;
- 4 credits from co-curricular courses.

## Grading Policies

For Ashoka's grading policy visit

<https://www.ashoka.edu.in/gradingpolicy>

## Grading System

Final letter grades students receive convert to grade point average (GPA) quality points. For how these relate to grades see the grid below. Individual faculty decide how grades map onto percentages.

Letter Grade	Quality Points	Letter Grade	Quality Points
A	4.0	C	2.0
A -	3.7	C-	1.7
B +	3.3	D +	1.3
B	3.0	D	1.0
B -	2.7	D -	0.7
C+	2.3	F	0

The CGPA is the cumulative grade point average up to the given semester. Degree CGPA is the final grade point average of the student. To understand how the CGPA corresponds to percentage bands, visit <https://www.ashoka.edu.in/converter>

## Repeated Courses

Students may repeat a course marked C- or below. The best attempt will count towards the students' CGPA.

## From the semester of Monsoon 2022 onwards:

Students can repeat a course in which they receive a passing grade of C- or above. This option can be exercised twice during the UG program. The best attempt will count towards the students' cumulative GPA (CGPA). The grade(s) from the other attempts remain on the transcript, but do not count towards the CGPA and are marked by an asterisk (\*)

## Grade Comments

**AU:** Course Audit. Awarded to students who successfully audit a course without earning any credits.

**I:** Incomplete. May be granted to students who were unable to complete coursework by the end of the semester. Failure to complete the coursework and earn a grade within a stipulated time results in a failing grade (F).

**P:** Pass. The student successfully completed the course and received credits. No effect on the GPA.

**TC:** Transfer Credit. Awarded to students who completed courses at another university. Credits are transferred, but grades earned do not affect the GPA.

**TP:** Teaching Practicum. Awarded to students who assisted a faculty member in a course.

**W:** Withdrawn. Assigned to students who withdrew from a course before week 9 of the semester. No effect on the GPA.

**WAU:** Withdrawn from Audit. Assigned to students who withdrew from an audited course. No effect on the GPA.

**WF:** Withdrawn (Fail). Assigned to students who withdrew from a course beyond week 8 of a semester. A WF has the same effect as an F.

**WX:** Withdrawn (Exceptional). Assigned to students who withdrew from a course after the last date for withdrawal due to exceptional reasons, e.g. severe illness. No effect on the GPA.

**Gap Semester:** Semester in which no courses were taken or all courses were dropped.

## Academic Distinctions

**Rank:** Ashoka neither computes nor awards "Class Rank".

**Dean's List:** Students with a GPA of  $\geq 3.65$  in a semester make the Dean's List in that semester.

**Honours:** Based on the CGPA calculated for courses taken at Ashoka during their undergraduate studies, students are awarded the following Honours.

**CUM LAUDE** (CGPA  $\geq 3.60$ )

**MAGNA CUM LAUDE** (CGPA  $\geq 3.75$ )

**SUMMA CUM LAUDE** (CGPA  $\geq 3.90$ )