# LAHORE UNIVERSITY OF MANAGEMENT SCIENCES

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|---|---|---|---|
| Name: | **Zoha Khan** | Degree: | **Bachelor of Science - BS** |
| Roll No.: | **2023-10-0021** | Major: | **Computer Science** |
| ID: | **22997** | Year Admitted: | **2019-20** |
| Date of Birth: | **Sep 18, 2000** | Year Graduated: | **Incomplete** |

| COURSE CODE | DESCRIPTION | CREDITS | GRADE |
|---|---|---|---|
| ***Fall Semester 2019-20*** | | | |
| CHEM 101 | Principles of Chemistry I | 3 | A |
| CS 100 | Computational Problem Solving | 3 | A |
| MATH 101 | Calculus I | 3 | A |
| PHY 100 | Experimental Physics Lab I | 2 | A+ |
| PHY 101 | Mechanics | 4 | A |
| SS 101 | Islamic Studies | 2 | A |
| Placed on Dean's Honour List. | | | |
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| ***Spring Semester 2019-20*** | | | |
| BIO 100 | Biology Laboratory | 1 | A+ |
| BIO 101 | Introductory Biology | 3 | A+ |
| CHEM 100 | Experimental Chemistry | 1 | A |
| EE 100 | Engineering Laboratory | 1 | A |
| MATH 120 | Linear Algebra with Differential Equations | 3 | A |
| PHY 104 | Modern Physics | 4 | A |
| SS 100 | Writing and Communication | 4 | A+ |
| Placed on Dean's Honour List at the end of academic year 2019-2020. | | | |
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| ***Fall Semester 2020-21*** | | | |
| CS 200 | Introduction to Programming | 4 | A+ |
| CS 210 | Discrete Mathematics | 4 | B |
| CS 225 | Fundamentals of Computer Systems | 4 | B+ |
| MATH 102 | Calculus II | 3 | A |
| SS 102 | Pakistan Studies: Culture and Heritage | 2 | A+ |
| Placed on Dean's Honour List. | | | |
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| ***Spring Semester 2020-21*** | | | |
| CS 202 | Data Structures | 3 | A- |
| CS 331 | Introduction to Artificial Intelligence | 3 | A |
| CS 382 | Network-Centric Computing | 3 | A |
| MATH 230 | Probability | 3 | A- |
| MKTG 201 | Principles of Marketing | 3 | A- |
| Placed on Dean's Honour List at the end of academic year 2020-21 | | | |
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| ***Fall Semester 2021-22*** | | | |
| CS 310 | Algorithms | 3 | A- |
| CS 370 | Operating Systems | 3 | A |
| CS 436 | Computer Vision Fundamentals | 3 | A |
| CS 535 | Machine Learning | 3 | A |
| MATH 210 | Introduction to Differential Equations | 3 | A+ |
| MGMT 373 | Personal Effectiveness | 3 | A |
| Placed on Dean's Honour List. | | | |
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| ***Spring Semester 2021-22*** | | | |
| CS 300 | Advanced Programming | 3 | A- |
| CS 360 | Software Engineering | 3 | A |
| CS 473 | Network Security | 3 | A |
| CS 497B | Directed Research Project | 2 | P |
| CS 678 | Topics in Internet Research | 3 | A- |
| Placed on Dean's Honour List at the end of academic year 2021-22 | | | |
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| ***Summer Semester 2021-22*** | | | |
| HIST2325 | A Brief History of Feminist Movement in Pakistan | 4 | A+ |
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| ***Fall Semester 2022-23*** | | | |
| CS 340 | Databases | 3 | A |
| CS 491A | Senior Project | 3 | |
| CS 682 | Topics in Computer and Network Security | 3 | A+ |
| EE 212 | Mathematical Foundations for Machine Learning and Data Science | 3 | A |
| MATH 341 | Operations Research I | 3 | A |

| | CREDITS | | |
|---|---|---|---|
| ATTEMPTED | 117 | | |
| TAKEN TOWARDS GPA | 112 | CGPA | 3.89 |
| TRANSFERRED | 0 | | |
| CREDITS GIVEN ON RE-ADMISSION | 0 | | |
| SUCCESSFULLY COMPLETED | 114 | | |

End of Undergraduate Programme Transcript

Official Seal
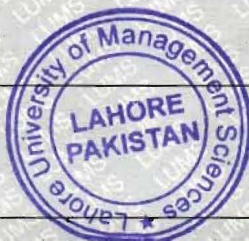
*L. F. Qizilbash*

Registrar

Date Printed: **10-Jan-2023**

# Transcript Interpretation
## Undergraduate Programme

The University moved from Quarter (Units) to Semester (Credits) System in Fall 2009-2010. This interpretation applies to both units and credits.

The medium of instruction at LUMS is English.

### Degree Requirements

| Programme | Required Units/Credits (Minimum) | Passing CGPA |
|---|---|---|
| BSc/BA (Honours), BS | 180/130 | 2.20/2.00 |
| BSc (Honours) Computer Engineering/BS (EE) | 192/133 | 2.20/2.00 |
| Double major | 225/160 | 2.20/2.00 |
| B.A.-LL.B | 220/162 | 2.20/2.00 |
| B.A.-LL.B/(Honours) | 0.00/162 | 0.00/2.00 |

### Explanation of Cumulative GPA/Specialization CGPA (CGPA/SCGPA)

- Batches 1997 to 2004: Calculated on a scale of 4.30
- Batches 2005 onwards: Calculated on a scale of 4.00

### Specialization CGPA

At the time of graduation, SCGPA (Specialization CGPA) is also visible on the transcript and is calculated on the basis of all courses taken in the area of the major.

### Notations

(): Credits for the course(s) given on readmission/transfer. Upon readmission, all credits will count towards attempted credit hours but not included in computation of CGPA. Transfer credits will not count towards attempted credits.

#: Under Repeat and Replace policy, this represents the lower grade for course(s) repeated. Credits and grades not included in computation of CGPA or towards completed credits. However, these credits count towards total attempted.

R*: Best grade for repeated course(s) which counts towards graduation requirements (i.e. CGPA and completed credits) and total attempted credits.

‡: Under All Grades Counts Policy, this represents the original grade of repeated course(s). Such credits and grades are included in the computation of CGPA. These credits are not included in total completed credits but are counted towards total attempted credits.

\* For courses repeated between Academic Year 2014-15 to 2015-16, 'R' will denote the latest attempt instead of best grade.

### Minor

Subject to fulfillment of the minor requirements; the title of the minor is displayed only on the transcript and not on the degree.

### Graduation Honours

| CGPA | Recognition |
|---|---|
| 3.80 and above* | Deans' Honour List and Graduation with High Distinction |
| 3.60 to 3.79 | Deans' Honour List and Graduation with Distinction |
| 3.30 to 3.59 | Graduation with High Merit |
| 3.10 to 3.29 | Graduation with Merit |

\*For Batch 2014 and onwards.

### Grading Legend

| Letter Grade | Grade Points | Description |
|---|---|---|
| A+ | 4.3* | Exceptional |
| A+ | 4.0** | Exceptional |
| A | 4.0 | Outstanding |
| A- | 3.7 | Excellent |
| B+ | 3.3 | Very Good |
| B | 3.0 | Good |
| B- | 2.7 | Average |
| C+ | 2.3 | Satisfactory |
| C | 2.0 | Low Pass |
| C- | 1.7 | Marginal Pass |
| D | 1.0 | Unsatisfactory |
| F | 0 | Fail |
| P | -- | Pass |
| NC | -- | No Credit*** |
| W | -- | Withdrawn |
| WF | -- | Withdrawn while failing |
| WP | -- | Withdrawn while passing |
| NGR | -- | No Grade Reported |
| I | -- | Incomplete |
| IP | -- | In-Progress |
| U | -- | Unsatisfactory |
| T | -- | Transfer |

\*For batches 2004 and earlier.
\*\*For batches 2005 and onwards.
\*\*\*From Spring 2020 onwards, this is a special accommodation due to COVID-19.

### Authenticity

A signed and dated transcript provides a certified copy of the student's academic performance. A LUMS official transcript is printed on security paper and sealed in an envelope or emailed via password protected PDF document. An official, confidential transcript can only be obtained directly from the Office of the Registrar. If the document is received with a broken seal or the PDF is not secure, the transcript should be considered an unofficial document.

### Contact Information

Office of the Registrar
Lahore University of Management Sciences (LUMS)
Sector U, DHA, Lahore-54792, Pakistan
Phone: (+92-42) 3560 8000
Transcript Enquiries only: registrar@lums.edu.pk
General Enquiries: helpdeskro@lums.edu.pk
Website: www.lums.edu.pk

Counter Signed by

Senior Assistant/Assistant Registrar
Lahore University of Management Sciences (LUMS)