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**Official Academic Transcript of:**  
XINHE ZHANG  
Transcript Created: 21-Oct-2020

**Requested by:**  
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Student Name: Xinhe Zhang

Birth Date/Month: 20-May

## Date Awarded Degree Awarded

May 20, 2018 Bachelor of Science in Electrical and Computer Engineering with University Honors  
- Carnegie Institute of Technology Research Honors

### Beginning of Undergraduate Record

#### ADVANCED PLACEMENT CREDIT

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE
CMY	09105	INTRO MOD CHEMSTRY I	10.0	AD
ECO	73100	PRINC OF ECONOMICS	9.0	AD
TOTAL AP / TRANSFER CREDIT			19.0	

#### Fall 2014

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
CS	15112	FNDMTLS OF PGMG & CS	12.0	A	48.0
ECE	18100	INTRO ELEC COMP ENG	12.0	A	48.0
MSC	21120	DIFFERENTIAL INT CAL	10.0	A	40.0
ENG	76100	READ WRITE ACAD CNTX	9.0	A	36.0
CMU	99101	CMPTNG CARNEGIE MELL	3.0	P	0.0
Semester			UNITS PASSED 46.0	UNITS FACTORED 43.0	FINAL QPA 4.00
Cumulative			65.0	43.0	4.00

#### Spring 2015

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
CS	15122	PRIN IMPRTV COMPTATN	10.0	A	40.0
MSC	21126	INTRO MATHMTCL SFTWR	3.0	A	12.0
MSC	21127	CONCEPTS OF MATHMTCS	10.0	A	40.0
PHY	33106	PHYSICS I ENG STUDNT	12.0	A	48.0
BMD	42101	INTRODUCTION BIOMED	12.0	B	36.0
PSY	85261	ABNORMAL PSYCHOLOGY	9.0	A	36.0
CMU	99250	SEMINAR PEER TUTORS	4.5	P	0.0
Semester			UNITS PASSED 60.5	UNITS FACTORED 56.0	FINAL QPA 3.79
Cumulative			125.5	99.0	3.88

#### Summer 1/All 2015

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
MSC	21122	INTEGRTN & APPROX	10.0	A	40.0
MSC	21241	MATRC & LINR TRNSF	10.0	A	40.0
Semester			UNITS PASSED 20.0	UNITS FACTORED 20.0	FINAL QPA 4.00
Cumulative			145.5	119.0	3.90

#### Summer 2 2015

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
PHY	33107	PHYSICS II ENG STDNT	12.0	A	48.0
ENG	76101	INTERPRETN & ARGMNT	9.0	A	36.0
Semester			UNITS PASSED 21.0	UNITS FACTORED 21.0	FINAL QPA 4.00
Cumulative			166.5	140.0	3.91

#### Fall 2015

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
MLG	10601	MACHINE LEARNING	12.0	W	0.0
CS	15150	PRIN FNCTIONL PRGMMG	10.0	W	0.0
CS	15539	IND STUDY CS PEDGOGY	6.0	B	18.0
MSC	21259	CALCULUS IN 3-D	9.0	W	0.0
STA	36217	PROB THEO RNDM PROC	9.0	W	0.0
DRA	54187	INTRO TO PLAYWRITING	9.0	A	36.0
Semester			UNITS PASSED 15.0	UNITS FACTORED 15.0	FINAL QPA 3.60
Cumulative			181.5	155.0	3.88

#### Spring 2016

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
CS	15150	PRIN FNCTIONL PRGMMG	10.0	A	40.0
ECE	18202	MATH FNDTN ELEC ENGR	12.0	B	36.0
ECE	18213	INTR CMPTR SYSTEMS	12.0	A	48.0
ECE	18290	SIGNALS & SYSTEMS	12.0	A	48.0
CIT	39210	EXPERINTIAL LEARNNG I	0.0	P	0.0
PSY	85251	PERSONALITY	9.0	B	27.0
Semester			UNITS PASSED 55.0	UNITS FACTORED 55.0	FINAL QPA 3.62
Cumulative			236.5	210.0	3.81

#### Summer 1/All 2016

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
ECE	18499	INTERNSHIP	3.0	P	0.0
Semester			UNITS PASSED 3.0	UNITS FACTORED 0.0	FINAL QPA 0.00
Cumulative			239.5	210.0	3.81

#### Fall 2016

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
CS	15462	COMPUTER GRAPHICS	12.0	C	24.0
ROB	16384	ROBOT KNMATCS DYNMCS	12.0	W	0.0
ECE	18200	ECE SOPH SEMINAR	1.0	P	0.0
ECE	18331	JUNIOR PROJECTS	10.0	A	40.0
ECE	18370	FNDMTLS OF CONTROL	12.0	A	48.0
STA	36217	PROB THEO RNDM PROC	9.0	B	27.0
CIT	39220	EXPERNTL LEARNNG II	0.0	P	0.0
HSS	66221	TOPICS OF LAW	9.0	A	36.0
Semester			UNITS PASSED 53.0	UNITS FACTORED 52.0	FINAL QPA 3.37
Cumulative			292.5	262.0	3.73

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John R. Papinchak  
University Registrar

Student Name: Xinhe Zhang

Birth Date/Month: 20-May

## Spring 2017

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
ECE	18240	STRC DES DIGTL SYSTM	12.0	A	48.0
ECE	18491	FNDML SIGNL PRCSNG	12.0	B	36.0
STA	36226	INTRO STATCL INFRCE	9.0	B	27.0
BA	70381	MARKETING I	9.0	A	36.0
		UNITS PASSED	UNITS FACTORED	FINAL QPA	TOTAL POINTS
Semester		42.0	42.0	3.50	147.0
Cumulative		334.5	304.0	3.69	1123.0

## Summer 1/All 2017

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
ECE	18499	INTERNSHIP	3.0	P	0.0
		UNITS PASSED	UNITS FACTORED	FINAL QPA	TOTAL POINTS
Semester		3.0	0.0	0.00	0.0
Cumulative		337.5	304.0	3.69	1123.0

## Fall 2017

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
MLG	10601	MACHINE LEARNING	12.0	B	36.0
ECE	18220	ELETRONC DEVC ANL CR	12.0	B	36.0
CIT	39310	EXPERITAL LEARN III	0.0	P	0.0
CIT	39402	LDERSP DVEL SEM	9.0	A	36.0
CIT	39500	HONORS RSCH PROJECT	12.0	A	48.0
		UNITS PASSED	UNITS FACTORED	FINAL QPA	TOTAL POINTS
Semester		45.0	45.0	3.47	156.0
Cumulative		382.5	349.0	3.66	1279.0

## Spring 2018

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
MLG	10703	DEEP RL & CONTROL	12.0	A	48.0
LTI	11611	NATRL LNGUAG PRCSNG	12.0	A	48.0
ECE	18500	ECE DESN EXP	12.0	B	36.0
CIT	39500	HONORS RSCH PROJECT	12.0	A	48.0
		UNITS PASSED	UNITS FACTORED	FINAL QPA	TOTAL POINTS
Semester		48.0	48.0	3.75	180.0
Cumulative		430.5	397.0	3.68	1459.0

## Dean's List

## End of Undergraduate Record and Beginning of Graduate Record

## Fall 2019

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
LTI	11785	INTRO DEEP LRNG.	12.0	A	48.0
ECE	18980	MS GRADUATE PROJECT	15.0	A	60.0
ECE	18980	MS GRADUATE PROJECT	12.0	A	48.0
		UNITS PASSED	UNITS FACTORED	FINAL QPA	TOTAL POINTS
Semester		39.0	39.0	4.00	156.0
Cumulative		39.0	39.0	4.00	156.0

## Spring 2020

DPT	CRS #	COURSE TITLE	UNITS	FINAL GRADE	QUALITY POINTS
MLG	10707	ADV. DEEP LEARNING	12.0	S	0.0
MLG	10708	PROB GRAPHCL MODELS	12.0	A	48.0
ECE	18753	INFORMATION THEORY	12.0	A	48.0
ECE	18980	MS GRADUATE PROJECT	1.0	A	4.0
		UNITS PASSED	UNITS FACTORED	FINAL QPA	TOTAL POINTS
Semester		37.0	25.0	4.00	100.0
Cumulative		76.0	64.0	4.00	256.0

## End of Graduate Record

A raised seal is not required.

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John R. Papinchak  
University Registrar

# Carnegie Mellon University

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### Family Education Rights and Privacy Act (FERPA) of 1974 as Amended

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### Accreditation

Carnegie Mellon University is an accredited member of the Middle States Commission on Higher Education, 3624 Market St., Philadelphia, PA 19104.

College and department accreditations include:

- Accreditation Board for Engineering Technology (ABET) – Chemical Engineering, Civil Engineering, Electrical and Computer Engineering, Engineering and Public Policy, Mechanical Engineering, and Materials Science and Engineering
- National Architectural Accrediting Board (NAAB) – Architecture
- National Association of Schools of Art and Design (NASAD) – Art and Design
- National Association of Schools of Music (NASM) – Music
- American Assembly of Collegiate Schools of Business (AACSB) and Middle Atlantic Association of College of Business Administration (MAACBA) – David A. Tepper School of Business; American Chemical Society (ACS) – Chemistry
- National Association of Schools of Public Affairs and Administration (NAPAA) – H. John Heinz III College.

### Language of Instruction

All Carnegie Mellon University courses are taught in English.

### Teaching Location

This transcript reflects all Carnegie Mellon coursework, independent of campus or teaching location.

### Calendar

Carnegie Mellon observes the semester system with two six-week summer sessions. Courses may be taught in other shortened sessions.

### Course Numbers

Each Carnegie Mellon University course number begins with a two-digit prefix which designates the department offering the course (76-xxx courses are offered by the Department of English, etc.). Although each department maintains its own course numbering practices, typically the first digit after the prefix indicates the class level: xx-1xx courses are freshmen-level, xx-2xx courses are sophomore level, etc. xx-6xx courses may be either undergraduate senior-level or graduate-level, depending on the department. Xx-7xx courses and higher are graduate-level.

### Degree Requirements

Degrees are awarded upon satisfactory completion of residence requirements, all requirements in the approved curriculum(a) and by recommendation for degree(s) by the faculty of the appropriate college(s).

### Units of Work vs. Credit Hours

Three units equal one semester hour of credit.

### Quality Point Average (QPA) Calculations

Carnegie Mellon University defines a quality point as a point value times units for a given course. QPAs are calculated according to the following formula:

*Semester QPA:* quality points divided by factorable units.

*Cumulative QPA:* total quality points divided by total factorable units.

Undergraduate courses may not be factorable into the QPA for graduate students, depending on the student's college.

### Units Carried vs. Passed vs. Factored

Units Carried refers to the total number of units for which the student is registered.

Units Passed is the total of all units that have a passing grade. Grades of 'R', 'N', and 'I' are not included in units passed.

Units Factored is the total of all units factored into QPA. See Grading Standards for grades not factorable into QPA. Undergraduate courses are not factorable into QPA for graduate students.

### Cumulative QPA

A separate cumulative QPA is calculated for undergraduate and graduate records. If a student attends for a combination of undergraduate, graduate studies, and/or non-degree studies, a cumulative QPA may not be calculated.

Cumulative QPA may not be available on transcripts for semesters prior to 1989.

### 4.0 Grading Standards

Undergraduate students (and graduate students in CFA, CIT, CMU, MCS, and SCS who entered before Fall 1995):

Grade	Point Value	Description
A	4.0	Excellent
B	3.0	Good
C	2.0	Satisfactory
D	1.0	Passing
R	0.0	Failure
X	0.0	Conditional Failure
S	non-factorable	Satisfactory
P	non-factorable	Passing
N	non-factorable	Failure in Pass/Fail Course
O	non-factorable	Audit
W	non-factorable	Withdrawal
I	non-factorable	Incomplete
AD	non-factorable	Credit by examination
TR	non-factorable	Transfer credit

### 4+ Grading Standards / 9.0 Grading Standards

The 4+ grading scale is applicable to graduate students who entered in and after Fall 1995. The 9.0 grading scale is applicable only to certain graduate students who entered before Fall 1995: Students in the Graduate School of Industrial Administration (GSIA, now Tepper School of Business (TSB)), the School of Urban and Public Affairs (SUPA, now Heinz College (HC)), and graduate students who were admitted to the College of Humanities and Social Sciences (H&SS, now Dietrich College (DC)) after August 1986.

Grade	Point Value (4+)	Point Value (9.0)	Description
A+ *	4.33	9	
A	4.00	8	
A-	3.66	7	
B+	3.33	6	
B	3.00	5	
B-	2.67	4	
C+	2.33	3	
C	2.00	2	
C-	1.67	1	
D+ *	1.33	-	
D *	1.0	0	
R	0.0	0	Failure
X	0.0	-	Conditional Failure
S	non-factorable	non-factorable	Satisfactory
P	non-factorable	non-factorable	Passing
N	non-factorable	-	Failure in Pass/Fail Course
O	non-factorable	-	Audit
W	non-factorable	-	Withdrawal
I	non-factorable	-	Incomplete
AD	non-factorable	-	Credit by examination
TR	non-factorable	-	Transfer credit

\* DC and CIT graduate students are not permitted to receive an A+. TSB and HC graduate students do not receive D or D+ grades.

**After the mid-point of the spring 2020 semester, a global pandemic caused a significant disruption that warranted temporary changes to our grading policy. These changes offered broader use of our Pass/No Pass (P/NP) grading option and the acceptance of passing grades to fulfill degree requirements.**

### Grading Scale & QPA Conversion

We are unable to provide conversion to other grading scales, such as percentage. A guide to our grading scale is provided on the back of all official transcripts. While we do provide overall semester QPA and cumulative QPA, we are unable to provide an "in-major" QPA (i.e. QPA for courses only in your major).

### Physical Education Courses

Physical Education Courses are considered Units Passed in the student's overall semester and cumulative QPA; they are not considered Units Factorable and are not used in calculating the student's overall semester QPA, rank in class or for academic actions.

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