

## Undergraduate Unofficial Transcript

Name: **Zhu, Richard**  
Student ID: **21017757**  
Ontario Education Nbr: **150550408**

### Beginning of Undergraduate Record

#### Fall 2022

Program: Mathematics, Honours, Co-operative Program  
Level: 1A Form Of Study: Enrolment

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
CS	135	Designing Functional Programs	0.50	0.50	91
MATH	135	Algebra for Honours Mathematics	0.50	0.50	91
MATH	137	Calculus 1 for Honours Mathematics	0.50	0.50	86
MTHEL	99	First-Year Mathematics Readiness	0.00	0.00	CR
Course Topic:		First year readiness			
SPCOM	100	Interpersonal Communication	0.50	0.50	87
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	88.75	Term Totals	2.00	2.00	
Cumulative GPA	88.75	Cumulative Totals	2.00	2.00	
Major Average:	89.33	Mathematics, Honours, Co-operative Program			
Faculty Average:	89.33	Mathematics, Honours, Co-operative Program			
Academic Standing:	Excellent Standing Effective 01/19/2023				
Term Honours:	Term Distinction				

#### Winter 2023

Program: Mathematics, Honours, Co-operative Program  
Level: 1B Form Of Study: Enrolment

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
CS	136	Elementary Algorithm Design and Data Abstraction	0.50	0.50	87
CS	136L	Tools and Techniques for Software Development	0.25	0.25	CR
MATH	136	Linear Algebra 1 for Honours Mathematics	0.50	0.50	97
MATH	138	Calculus 2 for Honours Mathematics	0.50	0.50	81
PD	1	Career Fundamentals	0.50	0.00	CR
PHIL	101	Challenging Ideas: An Introduction to Philosophy	0.50	0.50	65
STAT	230	Probability	0.50	0.50	76
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	81.20	Term Totals	3.25	2.75	
Cumulative GPA	84.56	Cumulative Totals	4.50	4.75	
Major Average:	87.00	Mathematics, Honours, Co-operative Program			
Faculty Average:	87.00	Mathematics, Honours, Co-operative Program			
Academic Standing:	Excellent Standing Effective 05/19/2023				
Term Honours:	Term Distinction				

#### Spring 2023

Program: Mathematics, Honours, Co-operative Program  
Level: 2A Form Of Study: Co-op Work Term

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
COOP	1	Co-operative Work Term	0.50	0.00	CR
PD	11	Processes for Technical Report Writing	0.50	0.00	CR
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	0.00	Term Totals	1.00	0.00	
Cumulative GPA	84.56	Cumulative Totals	4.50	4.75	
Major Average:	87.00	Mathematics, Honours, Co-operative Program			
Faculty Average:	87.00	Mathematics, Honours, Co-operative Program			

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### Fall 2023

Program: Mathematics, Honours, Co-operative Program  
Level: 2A Form Of Study: Enrolment

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
CO	250	Introduction to Optimization	0.50	0.50	82
MATH	237	Calculus 3 for Honours Mathematics	0.50	0.50	70
MATH	239	Introduction to Combinatorics	0.50	0.50	85
MUSIC	116	Music Ensemble	0.25	0.25	CR
STAT	231	Statistics	0.50	0.50	80
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	79.25	Term Totals	2.25	2.25	
Cumulative GPA	82.92	Cumulative Totals	6.50	7.00	
Major Average:	84.18	Mathematics, Honours, Co-operative Program			
Faculty Average:	84.18	Mathematics, Honours, Co-operative Program			
Academic Standing: Excellent Standing Effective 01/18/2024					

### Winter 2024

Program: Mathematics, Honours, Co-operative Program  
Level: 2B Form Of Study: Enrolment

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
CO	353	Computational Discrete Optimization	0.50	0.50	68
CS	245	Logic and Computation	0.50	0.50	78
FINE	130	Introduction to Digital Imaging	0.50	0.50	62
MATH	235	Linear Algebra 2 for Honours Mathematics	0.50	0.50	71
PMATH	340	Elementary Number Theory	0.50	0.50	63
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	68.40	Term Totals	2.50	2.50	
Cumulative GPA	78.89	Cumulative Totals	9.00	9.50	
Major Average:	80.40	Mathematics, Honours, Co-operative Program			
Faculty Average:	80.40	Mathematics, Honours, Co-operative Program			
Academic Standing: Good Standing Effective 05/16/2024					

### Spring 2024

Program: Mathematics, Honours, Co-operative Program  
Level: 3A Form Of Study: Co-op Work Term

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
COOP	2	Co-operative Work Term	0.50	0.00	NCR
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	0.00	Term Totals	0.50	0.00	
Cumulative GPA	78.89	Cumulative Totals	9.00	9.50	

### Fall 2024

Program: Combinatorics & Optimization, Honours, Co-operative Program  
Level: 3A Form Of Study: Enrolment

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
CO	342	Introduction to Graph Theory	0.50	0.00	WD
CO	351	Network Flow Theory	0.50	0.50	63
COMMST	223	Public Speaking	0.50	0.50	74
CS	246	Object-Oriented Software Development	0.50	0.50	75
MUSIC	275	Music and Technology	0.50	0.50	67
			<u>In GPA</u>	<u>Earned</u>	
Term GPA	69.75	Term Totals	2.50	2.00	
Cumulative GPA	77.23	Cumulative Totals	11.00	11.50	
Major Average:	79.06	Combinatorics & Optimization, Honours, Co-operative Program			
Faculty Average:	79.06	Combinatorics & Optimization, Honours, Co-operative Program			
Academic Standing: Good Standing Effective 01/21/2025					

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### Winter 2025

Program: Combinatorics & Optimization, Honours, Co-operative Program  
Level: 3A Form Of Study: Co-op Work Term

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
COOP	3	Co-operative Work Term	0.50	0.00	CR
PD	3	Communication	0.50	0.00	CR
			<u>In GPA</u>	<u>Earned</u>	
Term GPA		0.00 Term Totals	1.00	0.00	
Cumulative GPA		77.23 Cumulative Totals	11.00	11.50	

### Spring 2025

Program: Combinatorics & Optimization, Honours, Co-operative Program  
Level: 3A Form Of Study: Enrolment

<u>Course</u>		<u>Description</u>	<u>Attempted</u>	<u>Earned</u>	<u>Grade</u>
CO	342	Introduction to Graph Theory			
CO	432	Information Theory and Applications			
ECON	102	Introduction to Macroeconomics			
FR	192B	French Language 1: Module 2			
PMATH	336	Introduction to Group Theory with Applications			

### Milestones

<u>Date Completed</u>	<u>Description</u>	<u>Status</u>
12/31/2022	Undergraduate Communication Requirement - Part 1	Completed
08/31/2023	Work Term 1	Completed
12/31/2024	Undergraduate Communication Requirement	Completed
04/30/2025	Work Term 3	Completed

### Scholarships and Awards

2023 University of Waterloo President's Scholarship

**End of Undergraduate Unofficial Transcript**