

# NATIONAL UNIVERSITY OF SINGAPORE



**This is to certify that**

*TIAN FANG*

**having fulfilled the requirements prescribed  
by the University was conferred the degree of**

**BACHELOR OF SCIENCE  
WITH MERIT**

**on**

30 June 2023



  
*Chair, Board of Trustees*

  
*President*



# NATIONAL UNIVERSITY of SINGAPORE

## OFFICIAL TRANSCRIPT

**NAME:** TIAN FANG      **STUDENT NO:** A0194568L      **DATE OF BIRTH:** 01/06/2001      **DATE ISSUED:** 02/07/2023

**DEGREE CONFERRED:** BACHELOR OF COMPUTING (COMPUTER SCIENCE) WITH HONOURS (HIGHEST DISTINCTION)

**CUMULATIVE AVERAGE POINT:** 4.84

**CUMULATIVE MODULAR CREDITS:** 151.00

**ADMISSION DATE:** 05/08/2019

**CONFERMENT DATE:** 30/06/2023

**SPECIALISATION:** MULTIMEDIA MODELLING

**DEGREE CONFERRED:** BACHELOR OF SCIENCE WITH MERIT

**CUMULATIVE AVERAGE POINT:** 4.91

**CUMULATIVE MODULAR CREDITS:** 93.00

**ADMISSION DATE:** 05/08/2019

**CONFERMENT DATE:** 30/06/2023

**MAJOR:** APPLIED MATHEMATICS

COMPLETED THE UNIVERSITY TOWN COLLEGE PROGRAMME AT THE TEMBUSU COLLEGE

COMPLETED A DOUBLE DEGREE PROGRAMME

<u>MODULE</u>	<u>GRADE</u>	<u>CREDITS</u>
<b>ACADEMIC YEAR 2019/2020 SEMESTER 1</b>		
CS1101S	PROGRAMMING METHODOLOGY	A+ 4.00
CS1231S	DISCRETE STRUCTURES	A 4.00
ES1103	ENGLISH FOR ACADEMIC PURPOSES	S 4.00
MA1521	CALCULUS FOR COMPUTING	A+ 4.00

<u>MODULE</u>	<u>GRADE</u>	<u>CREDITS</u>
UTC1102G	JUNIOR SEMINAR: PROOF: WHAT'S TRUTH GOT TO DO WITH IT?	CS 4.00

**BACHELOR OF COMPUTING (COMPUTER SCIENCE)**  
**CUMULATIVE AVERAGE POINT : 5.00**

**ACADEMIC YEAR 2019/2020 SEMESTER 2**

CS2030	PROGRAMMING METHODOLOGY II	A 4.00
CS2040S	DATA STRUCTURES AND ALGORITHMS	A 4.00
ES2660	COMMUNICATING IN THE INFORMATION AGE	S 4.00
GER1000	QUANTITATIVE REASONING	A 4.00
IS1103	IS INNOVATIONS IN ORGANISATIONS AND SOCIETY	S 4.00
MA1101R	LINEAR ALGEBRA I	A+ 4.00
UTS2109	ASIA NOW! THE ARCHAEOLOGY OF THE FUTURE CITY	S 4.00
UTW1001D	SELF, SOCIETY, AND THE DIGITAL TSUNAMI ERA	S 4.00

**BACHELOR OF COMPUTING (COMPUTER SCIENCE)**  
**CUMULATIVE AVERAGE POINT : 5.00**

**ACADEMIC YEAR 2020/2021 SEMESTER 1**

CP2106	INDEPENDENT SOFTWARE DEVELOPMENT PROJECT (ORBITAL)	CS 4.00
CS1010R	PROGRAMMING METHODOLOGY	A+ 1.00
CS2101	EFFECTIVE COMMUNICATION FOR COMPUTING PROFESSIONALS	S 4.00
CS2103T	SOFTWARE ENGINEERING	A- 4.00
CS3230	DESIGN AND ANALYSIS OF ALGORITHMS	A+ 4.00
MA2104	MULTIVARIABLE CALCULUS	A 4.00
MA2108	MATHEMATICAL ANALYSIS I	A 4.00
MA2202S	ALGEBRA I (S)	B+ 5.00
MA2213	NUMERICAL ANALYSIS I	A+ 4.00



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<u>MODULE</u>		<u>GRADE</u>	<u>CREDITS</u>	<u>MODULE</u>	<u>GRADE</u>	<u>CREDITS</u>
UTC2107	SENIOR SEMINAR: NEGOTIATING IN A COMPLEX WORLD	S	4.00			
<b>BACHELOR OF COMPUTING (COMPUTER SCIENCE)</b>				<b>BACHELOR OF COMPUTING (COMPUTER SCIENCE)</b>		
<b>CUMULATIVE AVERAGE POINT : 4.95</b>				<b>CUMULATIVE AVERAGE POINT : 4.81</b>		
<b>BACHELOR OF SCIENCE</b>				<b>BACHELOR OF SCIENCE</b>		
<b>CUMULATIVE AVERAGE POINT : 4.88</b>				<b>CUMULATIVE AVERAGE POINT : 4.92</b>		
<b>ACADEMIC YEAR 2020/2021 SEMESTER 2</b>				<b>ACADEMIC YEAR 2021/2022 SEMESTER 2</b>		
CS2100	COMPUTER ORGANISATION	A	4.00	CS2102	DATABASE SYSTEMS	A 4.00
CS3217	SOFTWARE ENGINEERING ON MODERN APPLICATION PLATFORMS	A-	5.00	CS2105	INTRODUCTION TO COMPUTER NETWORKS	A 4.00
CS3243	INTRODUCTION TO ARTIFICIAL INTELLIGENCE	A-	4.00	CS2106	INTRODUCTION TO OPERATING SYSTEMS	A- 4.00
MA2101	LINEAR ALGEBRA II	A	4.00	CS3247	GAME DEVELOPMENT	A- 4.00
MA2216	PROBABILITY	A+	4.00	CS4248	NATURAL LANGUAGE PROCESSING	A+ 4.00
MA3252	LINEAR AND NETWORK OPTIMISATION	A+	4.00	ST2132	MATHEMATICAL STATISTICS	A- 4.00
UTW2001P	SCIENCE FICTION AND EMPIRE	A	4.00	<b>BACHELOR OF COMPUTING (COMPUTER SCIENCE)</b>		
<b>BACHELOR OF COMPUTING (COMPUTER SCIENCE)</b>				<b>CUMULATIVE AVERAGE POINT : 4.79</b>		
<b>CUMULATIVE AVERAGE POINT : 4.88</b>				<b>BACHELOR OF SCIENCE</b>		
<b>BACHELOR OF SCIENCE</b>				<b>CUMULATIVE AVERAGE POINT : 4.92</b>		
<b>CUMULATIVE AVERAGE POINT : 4.91</b>				<b>ACADEMIC YEAR 2022/2023 SEMESTER 1</b>		
<b>DEAN'S LIST</b>				CP4101	B.COMP. DISSERTATION	IP 12.00
<b>ACADEMIC YEAR 2021/2022 SEMESTER 1</b>				CS4225	BIG DATA SYSTEMS FOR DATA SCIENCE	A 4.00
CS3216	SOFTWARE PRODUCT ENGINEERING FOR DIGITAL MARKETS	B+	5.00	MA4230	MATRIX COMPUTATION	A- 4.00
CS3241	COMPUTER GRAPHICS	A+	4.00	MA4270	DATA MODELLING AND COMPUTATION	A 4.00
CS3244	MACHINE LEARNING	A+	4.00	<b>BACHELOR OF COMPUTING (COMPUTER SCIENCE)</b>		
CS4243	COMPUTER VISION AND PATTERN RECOGNITION	A-	4.00	<b>CUMULATIVE AVERAGE POINT : 4.80</b>		
MA3236	NON-LINEAR PROGRAMMING	A+	4.00	<b>BACHELOR OF SCIENCE</b>		



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## OFFICIAL TRANSCRIPT

**NAME:** TIAN FANG

**STUDENT NO:** A0194568L

**DATE OF BIRTH:** 01/06/2001

**DATE ISSUED:** 02/07/2023

**MODULE**

**GRADE**

**CREDITS**

**CUMULATIVE AVERAGE POINT : 4.90**

**ACADEMIC YEAR 2022/2023 SEMESTER 2**

CM1102	CHEMISTRY - THE CENTRAL SCIENCE	A	4.00
CP4101	B.COMP. DISSERTATION	A+	12.00
PC1101	FRONTIERS OF PHYSICS	A+	4.00
ST3131	REGRESSION ANALYSIS	A	4.00

**BACHELOR OF COMPUTING (COMPUTER SCIENCE)**

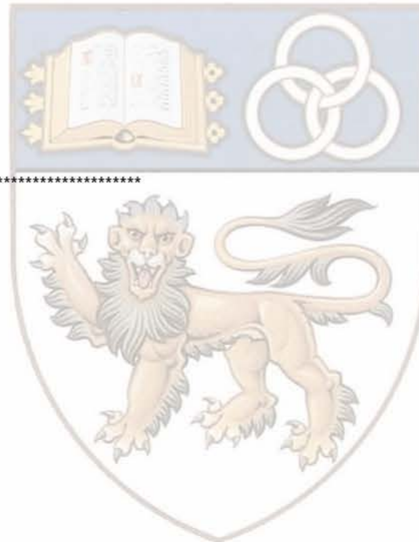
**CUMULATIVE AVERAGE POINT : 4.84**

**DEAN'S LIST**

**BACHELOR OF SCIENCE**

**CUMULATIVE AVERAGE POINT : 4.91**

\*\*\*\*\*END OF TRANSCRIPT\*\*\*\*\*



**NATIONAL UNIVERSITY OF SINGAPORE (NUS)**  
**Registrar's Office, University Hall (Lee Kong Chian Wing),**  
**#UHL-04-01, 21 Lower Kent Ridge Road, Singapore 119077**  
**Telephone : (65) 65162304**  
**Website : <https://www.nus.edu.sg/registrar>**

### TRANSCRIPT INFORMATION

Applicable to undergraduate and graduate programmes (unless specified otherwise)

#### GRADE LEGEND

Grade	Grade Point	Additional Grading Options
A+, A	5.00	S Satisfactory
A-	4.50	U Unsatisfactory
B+	4.00	CS Completed (Satisfactory)
B	3.50	CU Completed (Unsatisfactory)
B-	3.00	IC Incomplete
C+	2.50	IP In Progress
C	2.00	AUD Audit
D+	1.50	EXE Exempted
D	1.00	W Withdrawn
F	0.00	WU Withdrawal from University

#### SCHOOL OF BUSINESS – MASTER'S DEGREE PROGRAMME MODULES

Grade	Grade Point
DT (Distinction)	5.00
M (Merit)	4.00
Pass	3.00
Fail	0.00

#### FACULTY OF DENTISTRY / YONG LOO LIN SCHOOL OF MEDICINE – BACHELOR'S DEGREE PROGRAMME MODULES

Grade	Descriptor	Additional Grading Options
A+	Distinction	DT Distinction
A		M Merit
A-		P Pass
B+		IC Incomplete
B		IP In Progress
B-		W Withdrawn
C+		WU Withdrawal from University
C		
F		

#### SUPPLEMENTARY EXAMINATION AND RE-EXAMINATION

Students who sit for Supplementary Examination or Re-examination (if applicable) are awarded the grade appropriate to the marks they obtain.

#### MEDIUM OF INSTRUCTION

The medium of instruction used in the University is English, unless specified otherwise.

#### CUMULATIVE AVERAGE POINT (CAP)

The Cumulative Average Point (CAP) was introduced for students admitted from the Academic Year (AY) 1998/1999 onwards to track the progress of students under the Modular System. It is the weighted average grade point of all modules taken by the student.

#### MODULAR CREDIT (MC)

A modular credit (MC) is a unit of the effort, stated in terms of time, expected of a typical student in managing his/her workload. 1 MC is equivalent to 2.5 hours of study and preparation per week. Thus, a 4-MC module would require 10 hours of work a week, including lectures, tutorials, laboratory sessions, assignments, and independent or group study, over 13 Instructional Weeks in a semester.

#### GRADE-FREE SCHEME (GFS)

The Grade-free Scheme (GFS), in the form of 32 MCs of Satisfactory/Unsatisfactory (S/U) option, was introduced for **undergraduate** students admitted from AY2014/2015 onwards, to provide a supportive and enabling environment for them to make a successful transition into the academic and social aspects of university life.

It was enhanced from a grade-free first semester to a grade-free first year for undergraduate students admitted from AY2016/2017 onwards.

At the end of a semester, students may choose to retain the letter grade or to exercise the S/U option on a module, in which case the letter grade will not be shown on the transcript nor computed towards the CAP. An 'S' grade is assigned if students receive a C grade or above while a 'U' grade is assigned if the grade obtained is D+, D or F. Students will receive credits towards the degree only if they attain an 'S' grade.

#### LEAVE OF ABSENCE

Only leave of absence of one semester or longer is recorded in the transcript.

#### DEGREE CLASSIFICATION

The criteria for degree classification applicable to students admitted from AY2012/2013 onwards are as follows:

Honours Degree Classification <sup>(i)</sup>	Criteria
Honours (Highest Distinction)	CAP 4.50 and above <sup>(ii)</sup>
Honours (Distinction)	CAP 4.00 – 4.49
Honours (Merit)	CAP 3.50 – 3.99
Honours	CAP 3.00 – 3.49
Pass	CAP 2.00 – 2.99
Bachelor's Degree Classification <sup>(iii)</sup>	Criteria
Pass with Merit	CAP 3.00 and above
Pass	CAP 2.00 – 2.99

(i) This refers to 160-MC degree programmes.

(ii) Particular Faculties/Schools may stipulate other requirements.

(iii) This refers to 120-MC degree programmes.

This transcript shows the latest information. For information on earlier grade legends, please visit:

<https://www.nus.edu.sg/registrar/student-records/transcripts/official-transcripts> .

#### FACULTY OF LAW – DEGREE CLASSIFICATION

(a) The criteria for degree classification applicable to students conferred their Bachelor's of Laws (LLB) degrees from 30 June 2016 are as follows:

Degree Classification	Criteria
First Class Honours*	Obtained a Cumulative Weighted Numerical Average for all modules taken at NUS that is equivalent to a grade of A- or better, or finished in the top 10% of the graduating class.
Second Class (Upper Division) Honours*	Obtained a Cumulative Weighted Numerical Average for all modules taken at NUS that is equivalent to a grade of B or better, and do not qualify for First Class Honours.
Second Class (Lower Division) Honours	Obtained a Cumulative Weighted Numerical Average for all modules taken at NUS that is equivalent to a grade of C or better, and do not qualify either for First Class or Second Class (Upper Division) Honours.
Third Class Honours	Completed the number of credits required for a LLB (Honours) degree but do not qualify for First Class, Second Class (Upper Division) or Second Class (Lower Division) Honours.

\*Note: A student will not be eligible for First Class or Second Class (Upper Division) Honours if:

a) the student has failed more than 12 credits of modules at NUS (or while on an approved exchange programme); or

b) the student has taken more than 9 semesters to complete the 4-year LLB programme or 7 semesters to complete the 3-year Graduate LLB programme (excluding periods where the student has been granted a leave of absence).

(b) The criteria for degree classification applicable to students conferred their Juris Doctor (J.D.) degrees are as follows:

Degree Classification	Criteria
JD (Highest Distinction)	Obtained a Cumulative Weighted Numerical Average for all modules taken at NUS that is equivalent to a grade of A- or better.
JD (Distinction)	Obtained a Cumulative Weighted Numerical Average for all modules taken at NUS that is equivalent to a grade of B or better..
JD (Merit)	Obtained a Cumulative Weighted Numerical Average for all modules taken at NUS that is equivalent to a grade of C or better.
JD	Completed the number of credits required for a JD degree but do not qualify for HD (Highest Distinction), HD (Distinction) or JD (Merit).

#### CHECK FOR AUTHENTICITY:

This digital transcript has been issued by NUS and its authenticity is guaranteed only when it can be successfully accessed through the OpenCerts portal ([opencerts.io](http://opencerts.io)) or [nus.edu/e-documents](http://nus.edu/e-documents).