



NATIONAL UNIVERSITY of SINGAPORE

OFFICIAL TRANSCRIPT

NAME: LIU CHAOWEI **STUDENT NO.:** A0263758N **DATE OF BIRTH:** 03/12/1999 **DATE ISSUED:** 23/10/2023

PROGRAMME: MASTER OF SCIENCE (COMPUTER ENGINEERING)
PROGRAMME STATUS: ACTIVE IN PROGRAMME

<u>COURSE</u>	<u>GRADE</u>	<u>UNITS</u>
ACADEMIC YEAR 2022/2023 SEMESTER 1		
CEG5003 COMPUTER ENGINEERING PROJECT	IP	8.00
CEG5201 HARDWARE TECHNOLOGIES, PRINCIPLES, & PLATFORMS	A+	4.00
CEG5205 AI SENSORS AND VIRTUAL/AUGMENTED REALITY TECHNOLOGIES	A	4.00
EE4309 ROBOT PERCEPTION	B+	4.00
EE5731 VISUAL COMPUTING	A-	4.00

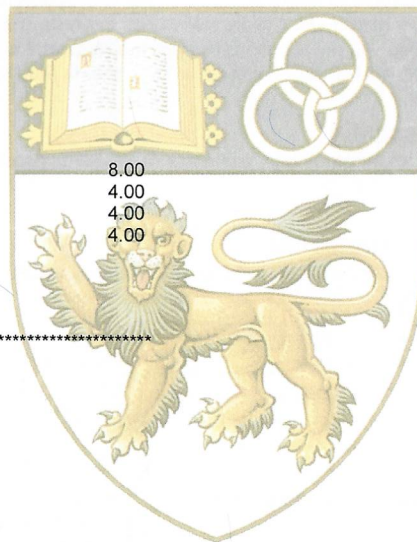
MASTER OF SCIENCE (COMPUTER ENGINEERING)
GRADE POINT AVERAGE: 4.63

ACADEMIC YEAR 2022/2023 SEMESTER 2

CEG5003 COMPUTER ENGINEERING PROJECT	A	8.00
CEG5301 MACHINE LEARNING WITH APPLICATIONS	A-	4.00
CEG5302 EVOLUTIONARY COMPUTATION AND APPLICATIONS	A	4.00
CEG5304 DEEP LEARNING FOR DIGITALIZATION TECHNOLOGIES	B+	4.00

MASTER OF SCIENCE (COMPUTER ENGINEERING)
GRADE POINT AVERAGE: 4.67

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



The transcript information below is applicable to undergraduate and graduate programmes, unless specified otherwise. For earlier transcript information, please visit nus.edu/transcripts.

MEDIUM OF INSTRUCTION

The medium of instruction used in the University is English, 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D	1.00	W Withdrawn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 PROGRAMMES

Grade	Grade Point	Additional Grading Options
DT (Distinction)	5.00	S Satisfactory
M (Merit)	4.00	U Unsatisfactory
Pass	3.00	CS Completed (Satisfactory)
Fail	0.00	CU Completed (Unsatisfactory)
		IC Incomplete
		IP In Progress
		AUD Audit
		EXE Exempted
		W Withdrawn
		WU Withdrawal from University

FACULTY OF DENTISTRY / YONG LOO LIN SCHOOL OF MEDICINE – BACHELOR'S DEGREE PROGRAMMES

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B-		W Withdrawn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.

UNITS

A unit is a measure of the effort, stated in terms of time, expected of a typical student in managing their course workload. One (1) unit is equivalent to 2.5 hours of study and preparation per week. Thus, a 4-unit course would require 10 hours of work a week, including lectures, tutorials, laboratory sessions, assignments, and independent or group study, in a regular semester.

GRADE POINT AVERAGE (GPA)

The Grade Point Average (GPA) tracks the progress of students under the modular system. It is the weighted average grade point of all courses taken by the student, unless specified otherwise. Courses with no assigned unit or grade point are excluded from the calculation of the GPA.

GRADE-FREE SCHEME (GFS)

The Grade-free Scheme (GFS), in the form of 32 units 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 to university life. If the S/U option is exercised on a course, its grade will not be computed towards the GPA. The units of a course will be counted towards the degree if an "S" grade is attained, and will not be counted if a "U" grade is attained.

LEAVE OF ABSENCE

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

DEGREE CLASSIFICATION

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

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

(i) For 160-unit Bachelor's degree programmes.

(ii) Each degree programme may stipulate its additional requirements.

(iii) For 120-unit Bachelor's degree programmes.

DEGREE VERIFICATION

Please obtain a self-verifiable digital transcript from the transcript bearer. Visit nus.edu/e-documents for more information.

FACULTY OF LAW – DEGREE CLASSIFICATION

(a) The criteria for degree classification applicable to students conferred their Bachelor 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 courses 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 courses 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 courses 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 units 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 units of courses 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 (JD) degrees are as follows:

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

CHECK FOR AUTHENTICITY:

The NUS official transcript is printed in landscape format on paper with security fibres and displays the NUS coat of arms as a watermark with a smaller NUS coat of arms in full colour as part of the letterhead. Each page of the official transcript is individually validated with the NUS seal and the Registrar's endorsement (on a tri-colour background) or by an authorised staff of the University.

OFFICIAL TRANSCRIPT

Name: Liu Chaowei

Gender: Male

Date of Birth: 1999-12-03

Student ID: U2101053

Date of Issue: 2022-05-24

Programme: NUS ECE/NUSRI/Harbin Institute of Technology, Shenzhen

"3+1+1" Educational Framework

Programme Status: Active

ACADEMIC YEAR 2021/2022

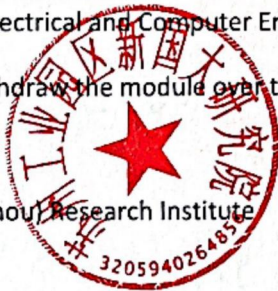
MODULES		MARKS CREDITS	
GE4000	Scientific writing and communication in English	92.00	4
GE4100	Science, Technology & Entrepreneurship Seminars	P	4
EE4400	Microwave Communications	91.20	4
EE4408	Machine Learning: Models and Applications	86.80	4
EE4600	Final Year Project	90.80	20
	Data Augmentation for Graph Neural Networks		

Average Mark: 90.20

Remark

- 1) The Full mark is 100
- 2) ECE : Electrical and Computer Engineering
- 3) P: Pass
- 4) W: Withdraw the module over the deadline

NUS (Suzhou) Research Institute





学生成绩单
Student's Academic Transcript

Name: LIU Chaowei
Student ID: 180210214
Entrance Time: August 2018

Program: Undergraduate
School: School of Electronics and Information Engineering
Major: Communication Engineering

Term	Course	Hours	Credits	Score	Term	Course	Hours	Credits	Score
18-19/ Fall	Advanced Computer Language Programming	48	3	84	18-19/ Summer	Chinese entrepreneurs and China business knowledge	16	1	74
	English Listening and Speaking	32	2	77		Appreciation of Shakespearian Plays	32	2	92
	Ideological and Moral Self-cultivation & Fundamentals of Law	48	3	85		Life-caring: First Aid and Self-rescue Skills	28	2	63
	Physical Education A	32	1	83		Cognition Practice	1 周	1	80
	Linear Algebra and Analytic Geometry	64	4	78		An Introduction to Sociology	32	2	71.8
	Wisdom of Business Ethics and Decision Making Between East and West	28	2	76		Probability Theory and Mathematical Statistics	40	2.5	92.2
	Advanced Mathematics A	80	5	87		Speech and communication	16	1	82
	Military Training and Theories	3 周	3	83		Entrepreneurship 101: Who is your customer?	16	1	81
	Image post-production expertise	32	2	74		Analog Electronic Techniques Experiments	24	1	92
	Introduction to Biomedical Engineering Technology	24	1.5	70		Fundamentals of Analog Electronics	56	3.5	85.6
18-19/ Spring	Entrepreneurship 102: What can you do for your customer?	16	1	68	19-20/ Fall	College Physics IB	64	4	93
	Essentials of life science	32	2	62		Functions of Complex Variable and Integral Transforms	40	2.5	91
	Electric Circuit Experiments II	12	0.5	87		Physical Education C	32	1	84.1
	English Reading & Writing	32	2	71		Physics Lab IA	33	1.5	74.4
	University Chinese	32	2	88		Introduction to Mao Zedong Thought and Theoretical System of Socialism with Chinese Characteristic A	32	2	89
	Advanced Mathematics B	80	5	84		Aesthetics and Life	28	2	100
	Modern Chinese History	48	3	79		Introduction to Mao Zedong Thought and Theoretical System of Socialism with Chinese Characteristic B	32	2	87.9
	College Physics IA	64	4	70		Signals and Systems	48	3	87.4
	Electric Circuit II	64	4	79		Introduction to Communication Engineering	32	2	87.5
	Fundamentals of Computer	32	2	81		Radio Frequency Electronic Circuits Experiments	24	1	94
	Physical Education B	32	1	86		Physical Education D	32	1	94.6
	Cities and Everyday Life	16	1	84		Radio Frequency Electronic Circuits	48	3	88.95
	The Dunhuang Art Appreciation	16	1	83		Mathematical Physics Equations	32	2	75
	Introduction to Chinese Historical Geography	28	2	64		Fantastic Bionics	28	2	97

Director: Ning Zhu

Department of Academic Affairs
Harbin Institute of Technology, Shenzhen
Print Date: 2021-09-08



Name: LIU Chaowei
Student ID: 180210214
Entrance Time: August 2018

Program: Undergraduate
School: School of Electronics and Information Engineering
Major: Communication Engineering

Term	Course	Hours	Credits	Score	Term	Course	Hours	Credits	Score
19-20/ Summer	Experiments for Signals and Systems	24	1	84	20-21/ Summer	Information and Coding Theory	48	3	95
	Mathematical Programming	48	3	91.7		Creative Thinking and Innovative Approaches	32	2	100
	Psychology of Intercultural Communication	32	2	97		Entrepreneurship Theory and Practice for College Students	30	2	97
	Practical course of Introduction to Mao Zedong Thought and Theoretical System of Socialism with Chinese Characteristic	16	1	88		Visible Light Communications	32	2	85
	The Basic Principle of Marxism	48	3	81.5		Random Signal Analysis	48	3	88
	Physics Lab IB	30	1	81.0		Project Design B: Basic Design for Signal Processing	2 周	2	92
	Engineering Training (Electronic Engineering)	2 周	2	85		FPGA Design and Application	48	2	84
20-21/ Fall	Communication Circuit Design	2 周	2	84.2	----Following is Blank----				
	Pattern Recognition	32	2	85					
	Principles of Communication	48	3	85					
	Digital Signal Processing Experiments	24	1	84					
	Digital Electronic Techniques Experiments	24	1	89					
	Electromagnetics	56	3.5	84					
	Experiments of Communication Principles	24	1	88					
20-21/ Spring	Digital Signal Processing	48	3	87					
	English for International Communication	32	2	100.0					
	Digital electronic technology foundation	56	3.5	92.0					
	Situation and Policy	32	2	86.5					
	Information and Coding Theory Experiments	24	1	98					
	Image Processing	32	2	90					
	Communication System Simulations	48	2	91					
	Communication Networks	48	3	94					
	Mobile Communication	48	3	82					
	Critical Thinking and Innovation	28	2	100					

Director: Ning Zhu

Department of Academic Affairs
Harbin Institute of Technology, Shenzhen
Print Date: 2021-09-08