



### Information identifying the holder of the qualification

Full Name: Minsuan Teh  
 Date of Birth: 4 November 1999  
 Matric / HUSID Number: S1817967 / 1811670133193

(HUSID (HESA Unique Student Identifier) is the unique identifying number for students registered at a UK university. It is defined by the UK's Higher Education Statistics Agency)

### Information identifying the qualification

Name of qualification and (if applicable) title conferred: Bachelor of Engineering with Honours; First Class  
(The power to award degrees is regulated by law in the UK.)

Main field(s) of study for the qualification: Computer Science

Name and status of awarding institution: The University of Edinburgh  
(The University of Edinburgh is a recognised body granted powers by the Privy Council to award degrees.)

Language(s) of instruction/examination: English

### Information on the level of the qualification

Level of qualification: SCQF level 10

Official length of programme: 4 Years

Access requirement(s): Detailed information regarding admission to the programme is available in the University's [Prospectus](#)

### Information on the contents and results gained

Mode of study: Full-time

Programme requirements: <http://www.drps.ed.ac.uk/21-22/dps/utcmpsibe.htm>

### Information on the function of the qualification

Access to further study:

Professional status (if applicable): For information on accreditation by BCS, The Chartered Institute for IT: [www.inf.ed.ac.uk/teaching/accreditation.html](http://www.inf.ed.ac.uk/teaching/accreditation.html)

### Further Information Sources

Further information sources: <http://www.ed.ac.uk/schools-departments/informatics>

Any enquiries regarding the above should be addressed to: Informatics Teaching Organisation, School of Informatics, Appleton Tower, 11 Crichton Street, Edinburgh, EH8 9LE; Tele: +44 (0) 131 650 2706; Web:

<http://www.ed.ac.uk/schools-departments/informatics>; email: [school-office@info.ed.ac.uk](mailto:school-office@info.ed.ac.uk)

Further information regarding the University of Edinburgh HEAR: <https://www.ed.ac.uk/student-administration/order-documents/transcripts/hear>

This Higher Education Achievement Report incorporates the model developed by the European Commission, Council of Europe and UNESCO/CEPS for the European Diploma Supplement. The purpose of the report is to provide sufficient recognition of qualifications (diplomas, degrees, certificates etc). It is designed to provide a description of the nature, level, context and status of the studies that were purposed and successfully completed by the individual named on the original qualification to which this report should be appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should be given.

**Programme details, and the individual grades/marks/credits obtained**

Programme Start Date: 17 September 2018

Qualification Conferred Date: 11 July 2022

Qualification Conferred: Bachelor of Engineering with Honours

Qualification Subject: Computer Science

Overall Classification of the Qualification: First Class

Academic Year	Code	Name	Mark	Grade	Result	SCQF Level	No. of attempts	Credits Achieved*
2018/19	INFR08014	Informatics 1 – Object-Oriented Programming	86	A2	P	08	1	10
2018/19	INFR08015	Informatics 1 – Data and Analysis	72	A3	P	08	1	10
2018/19	INFR08025	Informatics 1 – Introduction to Computation	89	A2	P	08	1	20
2018/19	MATH08057	Introduction to Linear Algebra	83	A2	P	08	1	20
2018/19	MATH08058	Calculus and its Applications	83	A2	P	08	1	20
2018/19	MATH08059	Proofs and Problem Solving	79	A3	P	08	1	20
2018/19	PHYS08016	Physics 1A: Foundations	88	A2	P	08	1	20
								<b>Sub Total: 120</b>
2019/20	INFR08010	Informatics 2D – Reasoning and Agents	79	A3	P	08	1	20
2019/20	INFR08019	Informatics 2C – Introduction to Software Engineering	59	C	P	08	1	10
2019/20	INFR08023	Discrete Mathematics and Mathematical Reasoning	81	A2	P	08	1	20
2019/20	INFR08026	Informatics 2 – Introduction to Algorithms and Data Structures		P	P	08	1	20
2019/20	INFR08027	Informatics 2C – Introduction to Computer Systems	64	B	P	08	1	20
2019/20	INFR08028	Informatics 2B – Learning		P	P	08	1	10
2019/20	MATH08067	Probability with Applications		P	P	08	1	20
								<b>Sub Total: 120</b>
2020/21	INFR09032	System Design Project	62	B	P	09	1	20
2020/21	INFR09051	Informatics Large Practical	73	A3	P	09	1	20
2020/21	INFR10022	Professional Issues (Level 10)	65	B	P	10	1	10
2020/21	INFR10052	Algorithms and Data Structures	82	A2	P	10	1	10
2020/21	INFR10067	Computer Security	68	B	P	10	1	20
2020/21	INFR10069	Introductory Applied Machine Learning	69	B	P	10	1	20
2020/21	INFR10074	Computer Communications and Networks	92	A1	P	10	1	20
								<b>Sub Total: 120</b>
2021/22	INFR10044	Honours Project (Informatics)	70	A3	P	10	1	40
2021/22	INFR11020	Algorithmic Game Theory and its Applications	82	A2	P	11	1	10
2021/22	INFR11021	Computer Graphics (Level 11)	82	A2	P	11	1	10
2021/22	INFR11023	Parallel Programming Languages and Systems (Level 11)	68	B	P	11	1	10
2021/22	INFR11098	Secure Programming	82	A2	P	11	1	10
2021/22	INFR11130	Machine Learning and Pattern Recognition	53	C	P	11	1	20
2021/22	INFR11131	Introduction to Modern Cryptography	42	D	P	11	1	10
2021/22	INFR11144	Blockchains and Distributed Ledgers	84	A2	P	11	1	10
								<b>Sub Total: 120</b>
								<b>Total: 480</b>

\* 1 European Credit Transfer Scheme (ECTS) credit = 2 University of Edinburgh credits

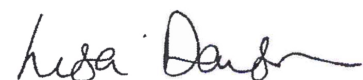
**Additional Information**

Prizes and Medals: None awarded

Additional Recognised Activities: None recorded

Additional Notes: None recorded

Certification:



Lisa Dawson, Academic Registrar

## Grading Scheme

Grade Expectations: <https://www.ed.ac.uk/student-systems/support-guidance/admin-support-staff/student-admin-colleges-schools/assessment-hub/recording-of-course-assessment-results-within-eucl>

Grades followed by 'A' = Fail (Credits Awarded on Aggregation)

Grades 'ES' and 'PS' = fail result of 38 or 39 but pass and credits awarded due to special circumstances

Grade CD = Course delivery disrupted, awarded on aggregate

## Common Marking Scheme from 2005/2006

With effect from Academic Session 2005/2006, the marking scheme for undergraduate degree examinations in all Schools is as follows, except for the Royal (Dick) School of Veterinary Studies and the M.B.,Ch.B. curriculum in the College of Medicine and Veterinary Medicine.

HONOURS		NON HONOURS		
Honours Class	Mark (%)	Grade	Description	
I	90–100	A1	Excellent	
I	80–89	A2	Excellent	
I	70–79	A3	Excellent	
II.1	60–69	B	Very Good	
II.2	50–59	C	Performance at a level showing the potential to achieve at least a lower second class honours degree	
III	40–49	D	Pass, may not be sufficient for progression to an honours programme	
Fail	30–39	E	Marginal Fail	
Fail	20–29	F	Clear Fail	
Fail	10–19	G	Bad Fail	
Fail	0–9	H	Bad Fail	

## Bachelor of Veterinary Medicine and Surgery (BVMS), Royal (Dick) School of Veterinary Studies

70–100 = A (Excellent); 60–69 = B (Very Good); 55–59 = C (Good); 50–54 = D (Satisfactory); 46–49 = E (Marginal Fail); 35–45 = F (Clear Fail); 0–34 = G (Bad Fail)

BVMS is a Masters level degree and is not classified into any other GPA or similar system. Due to differences in examining systems, it is rare for students to receive a mark greater than 80% with 70% or greater equating to a distinction.

## Postgraduate Extended Common Marking Scheme (with effect from Academic Session 2005/2006)

Mark (%)	Grade	Description
90–100	A1	An excellent performance, satisfactory for a distinction
80–89	A2	An excellent performance, satisfactory for a distinction
70–79	A3	An excellent performance, satisfactory for a distinction
60–69	B	A very good performance
50–59	C	A good performance, satisfactory for a master's degree
40–49*	D	A satisfactory performance for the diploma, but inadequate for a master's degree
30–39**	E	Marginal Fail***
20–29	F	Clear Fail***
10–19	G	Bad Fail ***
0–9	H	Bad Fail***

\* Assessment of the dissertation: A mark of 47–49 may be used to denote the possibility that by minor revision the work may be upgraded to a Masters standard.

\*\* Assessment of the dissertation: A mark of 37–39 may be used to denote the possibility that by minor revision the work may be upgraded to a diploma standard.

\*\*\* Assessment of the dissertation: In those programmes where a diploma may be awarded for the taught component only, a failed dissertation may be put aside for the diploma.

## Information on the National Higher Education System

### Description of Higher Education in Scotland

Scotland's distinctive higher education system has 20 higher education institutions (HEIs). The 14 Universities, the Open University in Scotland, 2 colleges of higher education, 2 art schools and a conservatoire are part-funded for research, teaching and learning through the Scottish Funding Council.

The HEIs are independent, self-governing bodies, active in teaching, research and scholarship. They decide the degrees they offer; the conditions on which they are awarded and the admissions arrangements. Degrees and other higher education qualifications are legally owned by the awarding institution, not by the state. The HEIs offer qualifications at undergraduate (Bologna first cycle) and postgraduate (Bologna second and third cycle) levels. In Scotland, the law distinguishes the power to award degrees on the basis of completion of taught programmes from the power to award research degrees. Universities have powers to award taught and research degrees. Some other HEIs have powers to award degrees while others offer programmes leading to degrees awarded by HEIs with degree powers.

Lists of institutions with powers toward degrees and institutions recognised by authorities in Scotland as being able to offer courses leading to a degree of another HEI may be found at (<http://www.univscities-scotland.ac.uk>). A small number of degrees are available in colleges of further education by the authority of a duly empowered HEI.

### Qualifications

The types of qualification awarded at the undergraduate (first cycle) and postgraduate level (second and third cycles) in Scotland are described in the Framework for Higher Education qualifications in Scotland which includes qualifications descriptors, developed with the higher education sector (<http://www.qaa.ac.uk>). The Framework is an integral part of a wider national framework: the Scottish Credit and Qualifications Framework that covers all forms of programmes and qualifications from School to Doctorates (see table 1 and <http://www.scqf.org.uk>). Institutions use SCQF credit points for students entering or transferring between programmes or institutions, and use ECTS for transfers within the European area.

### Admission

Requirements for particular programmes are set by the HEIs which offer a range of routes for entry and/or credit transfer into their programmes, and admit students whom they believe have the potential to complete their programmes successfully. The Open University is an open entry institution. The most common qualification for entry to higher education is the Higher or Advanced Higher or, for entrants from the rest of the U.K., the General Certificate of Education at 'Advanced' level (including the "advanced supplementary") or comparable qualifications. Four or five Highers are normally taken in the 5th and 6th year of secondary school or at college or further education and studied in considerable depth, involving coursework and final examinations. Advanced Highers are taken in the 6th year. A major route into Degrees, often with transfer of credit, is the higher National Qualifications offered in colleges or further education.

### Quality Assurance

Standards of qualification and the quality of the student learning experience are maintained by the HEIs using a range of processes including extensive use of external examiners. In some subject areas, Professional and Statutory Bodies have a role to ensure that programmes meet the needs and standards of the particular profession. HEIs in Scotland demonstrate their public accountability for quality and standards through a national quality and standards through a national quality assurance framework that has a strong focus on enhancement as follows: HEIs take account of a QAA published U.K.-wide code of practice for quality assurance, and U.K. subject level 'benchmark' statements on standards (see <http://www.qaa.ac.uk>). Subject level issues are addressed by HEIs internal reviews conducted in accordance with guidance issued by the Scottish Funding Council (SHEFC) (see <http://www.scf.ac.uk>). External reviews are conducted by the Quality Assurance Agency for Higher Education in Scotland (QAA). The Agency is an independent body established to provide public confidence in the quality and standards of higher education. It involves students in its quality enhancement activities. The Agency publishes reports on the outcomes of reviews and the confidence that can be placed in the HEIs' arrangements for assuring and enhancing standards and quality, and for ensuring that they provide public information that is complete, accurate and fair (see <http://www.qaa.ac.uk>). A national development service supports students in their role as active participants in assuring and enhancing quality and standards (see <http://www.sparqs.org.uk>).

### Table 1: The Scottish Credit and Qualifications Framework (SCQF)

The SCQF covers all the major qualifications in Scotland from school to Doctorate and including work based Scottish Vocational Qualifications (SVQs)

SCQF Level	Qualifications of Higher Education Institutions	SQA Higher National and National Units, Courses and Group Awards	SVQs
12	Doctoral Degrees (Minimum 540 SCQF credits)	–	–
11	Masters Degrees (Minimum 180 SCQF credits) Postgraduate Diploma (Minimum 120 SCQF credits) Integrated Masters Degrees (Minimum 600 SCQF credits)	–	SVQ 5
10	Bachelors Degree with Honours (Minimum 480 SCQF credits) Graduate Diplomas and Certificates	–	–
9	Bachelors Degree (Minimum 360 SCQF credit) Graduate Diplomas and Certificates	–	–
8	Diploma of Higher Education (Minimum 240 SCQF credits)	Higher National Diploma	SVQ 4
7	Certificate of Higher Education (Minimum 120 SCQF credits)	Advanced Higher Higher National Certificate	–
6	–	Higher	SVQ 3
5	–	Intermediate 2 Credit Standard Grade	SVQ 2
4	–	Intermediate 1 General Standard Grade	SVQ 1
3	–	Access 3 Foundation Standard Grade	–
2	–	Access 2	–
1	–	Access 1	–

### Notes

- SCQF levels represent increasing complexity and demand in learning outcome.
- One credit represents the outcomes achievable by the average through 10 notional hours of learner effort. In general terms, one full-time undergraduate year is considered to be 120 credits worth of learning. A postgraduate year is 180 credits. 1 ECTS credit is deemed equivalent to 2 SCQF credits. Research degrees – Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) are not credit rated.
- Graduate Certificates (minimum of 60 SCQF credits) and Graduate Diplomas (minimum of 120 credits) are offered at levels 9 and 10 within the SCQF framework. They are offered for programmes that are for graduates but do not have outcomes that are at postgraduate level.
- The Bachelors Degree (level 9) leads to employment and in some instances can give access to postgraduate study particularly when accompanied by relevant work or professional experience.
- At Postgraduate levels, the framework and the higher education qualifications are the same as those for the rest of the UK. The Honours Degree levels of the frameworks are considered to be in broad alignment (the Honours Degree in Scotland normally takes 4 years and that in the rest of the UK takes 3 years). Below Honours level the frameworks reflect the different educational structures of Scotland and the rest of the UK.
- Scotland has a distinctive higher education system and also operates under a devolved government, including for higher education. There is a separate Description of Higher Education in England, Wales and Northern Ireland where the system is different to that of Scotland.
- This national description is endorsed by the Quality Working Group which is a national committee with members from The Quality Assurance Agency for Higher Education, Scotland; The Scottish Funding Council; Universities Scotland and the National Union of Students in Scotland.

### Description of the University of Edinburgh

The University of Edinburgh was founded in 1583, and has 22 Schools in 3 Colleges: Humanities and Social Science, Medicine and Veterinary Medicine and Science and Engineering. It offers more than 300 degree programmes to its approximately 29,000 students. It is one of around a hundred universities in the United Kingdom and of 14 in Scotland. Higher Education, including universities, within Scotland is the responsibility of the Scottish Parliament, which has powers devolved from the U.K. Parliament.

The University is an independent, self-governing body that is active in both teaching and research. Its mission is the advancement and dissemination of knowledge and understanding. (See <http://www.planning.ed.ac.uk/Strategic-Planning/MissionStatement.htm> for fuller details of the University's mission and plan). Like all universities in the UK, its degrees are its own responsibility, not that of the State. The University is funded from a variety of sources, including a block grant from the Scottish government, academic fees, research grants, and other sources.

About 4,500 students graduate every year with a Bachelors degree with honours and after four-years of study. For long-standing historical reasons, many degrees at this level in humanities subjects are designated Master of Arts. There are also some "undergraduate masters degrees" in science subjects that require five years of study and take students to a postgraduate level of achievement without their having achieved an intermediate bachelors degree. The outcome of these honours degrees is quoted in terms of the "classification" of the degree: first (the highest), upper second, lower second, or third. Some students graduate with a non-honours "ordinary" degree, which is not classified, although a transcript showing their marks is available. This system is common to all the universities in the UK.

About 2,000 students each year graduate with postgraduate degrees, generally designated as Master or Doctor. These degrees are not classified.

