

How to Authenticate This Official Transcript From the Massachusetts Institute of Technology

This official transcript has been transmitted electronically to the recipient, and is intended solely for use by that recipient. If you are not the intended recipient, please notify the MIT Registrar's Office. It is not permissible to replicate this document or forward it to any person or organization other than the identified recipient. Release of this record or disclosure of its contents to any third party without written consent of the record owner is prohibited.

This official transcript has been digitally signed and therefore contains special characteristics. If this document has been issued by MIT, and this document is viewed using Adobe® Acrobat version 6.0 or greater, or Adobe® Reader version 6.04 or greater, it will reveal a digital certificate that has been applied to the transcript. This digital certificate will appear in a pop-up screen or status bar on the document, display a blue ribbon, and declare that the document was certified by MIT with a valid certificate issued by GeoTrust CA for Adobe®. This document certification can be validated by clicking on the Signature Properties of the document.



The blue ribbon symbol is your assurance that the digital certificate is valid, the document is authentic, and the contents of the transcript have not been altered.



If the transcript does not display a valid certification and signature message, reject this transcript immediately. An invalid digital certificate display means either the digital signature is not authentic, or the document has been altered. The digital signature can also be revoked by the transcript office if there is cause, and digital signatures can expire. A document with an invalid digital signature display should be rejected.



Lastly, one other possible message, Author Unknown, can have two possible meanings: The certificate is a self-signed certificate or has been issued by an unknown or untrusted certificate authority and therefore has not been trusted, or the revocation check could not complete. If you receive this message make sure you are properly connected to the internet. If you have a connection and you still cannot validate the digital certificate on-line, reject this document.

The transcript key and guide to transcript evaluation is the last page of this document.

The current version of Adobe® Reader is free of charge, and available for immediate download at <http://www.adobe.com>.

If you require further information regarding the authenticity of this transcript, you may email or call the MIT Registrar's Office at records@mit.edu or 617-253-2658.



Wei Chieh Ng

MIT ID: 924 255 648

Admitted as a Regular Student for Fall Term 2018-2019

Completed Programs:

Physics - Doctoral (Course 8 D)/Doctorate

Program/Degree Objective as of Current Term:

Physics/Doctorate

Subject	Subject Name	Lvl	Cred	Grade
---------	--------------	-----	------	-------

FALL TERM 2018-2019 COURSE: 8 D GRADUATE STUDENT

8.321	Quantum Theory I	G	12	A
8.333	Statistical Mechanics I	G	12	B
8.391	Pre-Thesis Research	G	12	P

SPRING TERM 2018-2019 COURSE: 8 D GRADUATE STUDENT

8.311	Electromagnetic Theory	G	12	A
8.392	Pre-Thesis Research	G	12	P
8.901	Astrophysics I	G	12	A

SUMMER TERM 2019 COURSE: 8 D GRADUATE STUDENT

8.392	Pre-Thesis Research	G	36	P
-------	---------------------	---	----	---

FALL TERM 2019-2020 COURSE: 8 D GRADUATE STUDENT

8.391	Pre-Thesis Research	G	24	P
8.902	Astrophysics II	G	12	B

SPRING TERM 2019-2020 COURSE: 8 D GRADUATE STUDENT

Semester significantly disrupted starting 3/13/2020 due to Coronavirus COVID-19 outbreak. Mandatory Alternate Grades in effect.

8.323	Rel Quantum Field Theory I	G	12	PE
8.392	Pre-Thesis Research	G	12	PE
8.399	Physics Teaching	G	12	PE

SUMMER TERM 2020 COURSE: 8 D GRADUATE STUDENT

Significant disruption in effect due to Coronavirus COVID-19 pandemic

8.392	Pre-Thesis Research	G	36	P
-------	---------------------	---	----	---

FALL TERM 2020-2021 COURSE: 8 D GRADUATE STUDENT

Significant disruption in effect due to Coronavirus COVID-19 pandemic

8.391	Pre-Thesis Research	G	36	P
-------	---------------------	---	----	---

JANUARY TERM 2020-2021 COURSE: 8 D GRADUATE STUDENT

-- Continued in Next Column --

Subject Subject Name Lvl Cred Grade

Significant disruption in effect due to Coronavirus COVID-19 pandemic

8.THG	Thesis	G	12	J/SA
-------	--------	---	----	------

SPRING TERM 2020-2021 COURSE: 8 D GRADUATE STUDENT

Significant disruption in effect due to Coronavirus COVID-19 pandemic

8.399	Physics Teaching	G	12	P
8.THG	Thesis	G	24	J/SA

SUMMER TERM 2021 COURSE: 8 D GRADUATE STUDENT

Significant disruption in effect due to Coronavirus COVID-19 pandemic

8.THG	Thesis	G	36	J/SA
-------	--------	---	----	------

FALL TERM 2021-2022 COURSE: 8 D GRADUATE STUDENT

8.701	Intro: Nuclear & Particle Phys	G	12	A
8.THG	Thesis	G	24	J/SA

JANUARY TERM 2021-2022 COURSE: 8 D GRADUATE STUDENT

8.THG	Thesis	G	12	J/SA
-------	--------	---	----	------

SPRING TERM 2021-2022 COURSE: 8 D GRADUATE STUDENT

8.399	Physics Teaching	G	12	P
8.THG	Thesis	G	24	J/SA

SUMMER TERM 2022 COURSE: 8 D GRADUATE STUDENT

8.THG	Thesis	G	36	J/SA
-------	--------	---	----	------

-- Continued Next Page --

-- No Entries Valid Below This Line --

OFFICIAL TRANSCRIPT:
Order #: AVOW:TE06918E

ISSUED 02-JUN-2024
Page 1 of 2

Issued to

Wei Ng
25 Antrim St
Cambridge, MA 02139-1101

Unofficial without signature
Brian E. Canavan, Registrar



Wei Chieh Ng

(Continued from page 1)

Subject	Subject Name	Lvl	Cred	Grade
FALL TERM 2022-2023	COURSE:	8 D	GRADUATE	STUDENT
8.THG	Thesis	G	36	J/SA
	* * *			
SPRING TERM 2022-2023	COURSE:	8 D	GRADUATE	STUDENT
1.C51	Mach Learn for Sustainable Sys	N	6	P
6.C51	Model Mach Learn Algor to Apps	G	6	B
8.THG	Thesis	G	24	J/SA
	* * *			
SUMMER TERM 2023	COURSE:	8 D	GRADUATE	STUDENT
8.THG	Thesis	G	36	J/SA
	* * *			
FALL TERM 2023-2024	COURSE:	8 D	GRADUATE	STUDENT
8.THG	Thesis	G	36	J/SA
	* * *			
JANUARY TERM 2023-2024	COURSE:	8 D	GRADUATE	STUDENT
8.THG	Thesis	G	12	J/SA
	* * *			
SPRING TERM 2023-2024	COURSE:	8 D	GRADUATE	STUDENT
8.THG	Thesis	G	36	SA
	* * *			

01-MAR-2024 Doctoral General Examination completed

30-MAY-2024 Awarded the Degree of Doctor of Philosophy;
thesis in the field of Physics: Multifaceted
Understanding of Accreting Neutron Stars and
their Environments

Graduate Cumulative GPA: 4.6 (on a 5.0 scale)

-- END OF RECORD --
-- No Entries Valid Below This Line --

OFFICIAL TRANSCRIPT:
Order #: AVOW:TE06918E

ISSUED 02-JUN-2024
Page 2 of 2

Issued to

Wei Ng
25 Antrim St
Cambridge, MA 02139-1101

Unofficial without signature
Brian E. Canavan, Registrar *Brian E. Canavan*

Authentication of Transcript

This official transcript is available in electronic or paper versions. The e-transcript is authenticated using secure Portable Document Format technology developed by Adobe. The paper version is printed on security paper, does not require a raised seal, and bears the date issued and the facsimile signature of the Registrar. The document will stain when touched by chemicals. The back of the paper document contains a watermark, hold at an angle to view. A black and white document is not an original and should not be accepted as official.

Academic Terms, Student Classification, and Courses

MIT's academic calendar has fifteen-week Fall and Spring Terms including exams, a ten-week Summer Term, and a four-week January Term.

Classification: Undergraduate students (Freshman, Sophomore, Junior, Senior) and Graduate students are matriculated in MIT degree programs; Special students, Exchange students, and Cross-registered students are not. Non-resident graduate students are working on doctoral thesis away from MIT.

Course: The student's Course (degree program) begins with a department or program code as listed below, followed by an option within the department. Undergraduate program options can indicate specialty area. Option codes used in graduate programs starting in Fall 1994 include: M, P, or A, Master's; D, Doctoral; CT, Transportation; RE, Real Estate Development; W, Joint with Woods Hole Oceanographic Institution. Freshmen are not permitted to register in a department. Transfer students generally enter as Sophomores.

Subject, Level, and Credit

Subject: Consists of a department or program code (see list below) followed by a period and a number. **Level (Lvl):** Subjects included in undergraduate cumulative record: **U.** Subjects included in graduate cumulative record: subject approved for (higher) graduate degree credit: **H** (through Summer 2015); other subject accepted for graduate degree credit: **G**; subject in graduate program but not accepted for graduate degree credit: **N.** **Credit:** A credit unit represents one hour of class (lecture/recitation), laboratory/design/fieldwork, or preparation per week for fourteen weeks. Three MIT credit units = one Semester Hour.

Explanation of Grades since 1980

- A** Exceptionally good performance, demonstrating a superior understanding of the subject matter, a foundation of extensive knowledge, and a skillful use of concepts and/or materials.
- B** Good performance, demonstrating capacity to use the appropriate concepts, a good understanding of the subject matter, and an ability to handle the problems and materials encountered in the subject.
- C** Adequate performance, demonstrating an adequate understanding of the subject matter, an ability to handle relatively simple problems, and adequate preparation for moving on to more advanced work in the field.
- D** Minimally acceptable performance, demonstrating at least partial familiarity with the subject matter and some capacity to deal with relatively simple problems, but also demonstrating deficiencies serious enough to make it inadvisable to proceed further in the field without additional work.
- F** Failed.
- J,U** **J** Satisfactory progress that term. **U** Progress not satisfactory that term. Final grade in same subject in a later term also covers this term (e.g., J/B or U/A).
- P** Prior to Fall 1990: reflects performance at any of the levels A, B, C, or D. Fall 1990 through Summer 1992: for first-year undergraduates reflects performance at any of the levels A, B, or C; for other than freshmen reflects performance at any of the levels A, B, C, or D. Fall 1992 and after: reflects performance at any of the levels A, B, or C, with students graded on a P/D/F basis.
- I** Incomplete. When work completed, final grade follows I (e.g., I/B).
- O** Absent from the final examination, did not turn in the final paper or project, and/or was absent during the last two weeks of the term. Equivalent to a grade of F.
- OX** Absence satisfactorily explained and excused. When work is completed final grade replaces the OX.
- SA** Satisfactorily completed doctoral thesis.
- S** Credit awarded for work done elsewhere.
- URN** Subject in Undergraduate Research Opportunities Program taken for pay or as a volunteer rather than academic credit (the one unit shown does not count for degree credit).
- VIS** Research subject taken as a non-degree visiting student.
- &** Grade ending in & indicates Advanced Standing Exam (not included in GPA).
- #** Grade ending in # indicates ROTC (not included in degree credit; not included in GPA after Summer 1994).
- MG** Indicates grade not submitted by instructor.
- IP** Indicates subject "in progress" in current term.
- PE** Reflects performance at any of the levels A, B, or C, under an emergency disruption.
- IE** Incomplete. Indicates a portion of the subject requirements has not been fulfilled, due to a major disruption of academic activities. When work completed, final grade follows (e.g., IE/B).

Freshman Grading

Prior to Fall 1990: Freshmen graded on P/F basis with F grade not recorded on transcript. Fall 1990 to Summer 2002: Freshmen graded on P/D/F basis with non-passing D and F grades not recorded on transcript. Fall 2002 and after: Freshmen graded in their second semester on A/B/C/D/F basis with non-passing D and F grades not recorded on transcript.

Cumulative Grade Point Averages

Calculated on a 5.0 scale with A = 5, B = 4, C = 3, D = 2, F and O = 0. P, PE, SA, S, URN, MG, and IP, as well as non-passing grades in Freshman year, not included in GPA. J, U, I, IE, and OX grades not included in GPA until completed. Undergraduate Cumulative GPA includes subjects at Level U and Graduate Cumulative GPA includes subjects at Level H, G, and N, and up to a maximum of 24 units of thesis.

Department and Program Codes since 1980

- 1** Civil and Environmental Engineering (Civil Engineering prior to Fall 1992)
- 2** Mechanical Engineering
- 3** Materials Science and Engineering
- 4** Architecture
- 5** Chemistry
- 6** Electrical Engineering and Computer Science
- 7** Biology
- 8** Physics
- 9** Brain and Cognitive Sciences (Psychology prior to Fall 1986)
- 10** Chemical Engineering
- 11** Urban Studies and Planning
- 12** Earth, Atmospheric, and Planetary Sciences (Earth and Planetary Sciences prior to Fall 1984)
- 13** Ocean Engineering (through Spring 2007)
- 14** Economics
- 15** Management
- 16** Aeronautics and Astronautics
- 17** Political Science
- 18** Mathematics
- 19** Meteorology and Physical Oceanography (through Summer 1983) (Meteorology through Summer 1980)
- 20** Biological Engineering (Applied Biological Sciences through Summer 2003) (Nutrition and Food Science prior to Fall 1985)
- 21** Humanities
- 21A** Anthropology (Anthropology/Archaeology from Summer 1989 through Summer 1996)
- 21F** Foreign Languages and Literatures (through Summer 2015)
- 21G** Global Languages (Global Studies and Languages through Summer 2020)
- 21H** History
- 21L** Literature
- 21M** Music and Theater Arts
- 21W** Writing and Humanistic Studies (Writing from Summer 1989 through Summer 1991)
- 22** Nuclear Science and Engineering (Nuclear Engineering through Spring 2005)
- 24** Linguistics and Philosophy
- 25** Interdisciplinary Science (to Spring 1983)
- BE** Biological Engineering (through Summer 2006) (**BEH** Bioengineering and Environmental Health from Fall 1998 through Summer 2002; **TOX** Toxicology from Spring 1989 through Summer 1998)
- CDO** Computation for Design and Optimization (through Summer 2020)
- CMS** Comparative Media Studies
- CSB** Computational and Systems Biology
- CSE** Computational Science and Engineering
- EM** Engineering Management
- ESD** Engineering Systems Division
- HPM** Health Policy and Management (1983-1990)
- HST** Harvard-MIT Division of Health Sciences and Technology
- IDS** Institute for Data, Systems, and Society
- MAS** Media Arts and Sciences
- OR** Operations Research
- PEP** Professional Education Programs (**ASP** Advanced Study Program through Summer 2006; **CAES** Center for Advanced Educational Services from Spring 1996 through Summer 2003; **EN** Center for Advanced Engineering Study prior to 1995)
- RED** Real Estate Development
- SCM** Supply Chain Management
- SDM** System Design and Management (through Summer 2010)
- STS** Science, Technology, and Society
- TPP** Technology and Policy Program (through Summer 1999)
- UND** Undesignated Sophomore (not yet declared Course)

Used for subjects only: **SEM** Undergraduate Seminar; **CTS** Center for Transportation Studies; **CC** Concourse; **ES** Experimental Study Group; **SP** Special Programs; **AS/MS/NS** ROTC; **SRE** Division for Study and Research in Education; **EC** Edgerton Center; **WGS** Women's & Gender Studies. Subjects taken under a Cross-registration arrangement begin with the following school codes: **BU** Boston U; **HA** Harvard U; **MC** Mass College of Art and Design; **SM** School of Museum of Fine Arts; **TU** Tufts U; **W** Wellesley College.

Privacy

In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, information on this transcript may not be released to or accessed by any other party without the prior written consent of the student concerned. For questions please contact the MIT Registrar's Office, (617) 253-2658.

Revised October 2020