Sophomore year

University of California at Berkeley
Department of Physics

UNDERGRADUATE COURSE & TEXTBOOK LIST

(Graduate courses may be included.)

Applicant's Name: Huan Quang Bui

Undergraduate Institution: Colby College

In order to help us evaluate your undergraduate preparation, please fill out the table below with the physics and mathematics courses you have taken in the last two years of undergraduate study. Include those you plan to take next semester/quarter. If you have taken graduate courses please include these also.

Domestic applicant: Please calculate your grade point average for the junior and senior level physics and math courses you have taken: 4.24/4.3

Course Number & Title	Units	Grade	Textbooks Used
MA262: Vector Calculus	4	4.3	Colley, Vector Calculus
MA311: Ordinary Differential Equations	4	4.3	n/a (instructor's notes)
MA381: Probability	4	4.0	Anderson, Seppalainen and Valko, Introduction to Probability
PH335: General Relativity & Cosmology	4	4.0	Foster and Nightingale, A Short Course in General Relativity
MA353: Matrix Analysis	4	4.3	Horn and Garcia, A Second Course in Linear Algebra
MA411: Topics in Partial Differential Equations	4	4.3	Farlow, Partial Differential Equations for Scientists and Engineers
PH332: Thermodynamics & Statistical Mechanics	4	4.3	Schroeder, An Introduction to Thermal Physics
PH492: Independent Study (classical field theory)	2	4.3	instructor's notes + Carroll, Spacetime and Geometry
(junior + senior courses on the next 2 pages)			

Junior + Senior year

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Course Number & Title	Units	Grade	Textbooks Used
MA333: Abstract Algebra	4	4.3	J. Gallian, Contemporary Abstract Algebra, 8th ed.
MA352: Complex Analysis	4	4.3	Churchill & Brown, Complex Variables and Applications, 5th ed.
PH321: Electricity & Magnetism	4	4.0	D.J. Griffiths, Introduction to Electrodynamics, 4th ed.
PH431: Quantum Mechanics	4	4.3	D.J. Griffiths, Introduction to Quantum Mechanics, 2nd ed.
PH491: Independent Study (quantum & classical field theory)	2	4.3	A. Zee, Quantum Field Theory in a Nutshell, 2nd ed.
MA338: Real Analysis	4	4.3	Rudin, Principles of Mathematical Analysis, 3rd ed.
MA434: Topics in Abstract Algebra (algebraic geometry)	4	4.3	Reid, Undergraduate Algebraic Geometry
PH492: Independent Study (qntm. field th. & massive gravity)	2	4.3	A. Zee, Quantum Field Theory in a Nutshell, 2nd ed. & research papers
PH398: Topics in Quantum Information	2	4.3	Mermin, Quantum Computer Science: An Introduction
MA492: Independent Study (research)	4	4.3	Research and reading in measure theory and harmonic analysis. Referenced: Stein's Functional Analysis, Folland's Real Analysis: Modern Techniques and Their Applications,
MA/SC482: Statistical Inference	4	4.0	Hogg, McKean, Craig, Introduction to Mathematical Statistics, 8th ed
MA439: Topics in Real Analysis (topology & func. analysis)	4	IP	Willard, General Topology
MA483: Mathematics Honors Project	4	IP	n/a: Research in mathematical physics & analysis.
PH333: Experimental Soft Matter Physics	4	IP	n/a
PH483: Physics Honors Project	4	IP	n/a
PH491: Independent Study (quantum field theory)	4	IP	Peskin & Schroeder, An Introduction to Quantum Field Theory
PH312: Physics of Fluids (Sp 2021)	4	n/a	not yet listed
PH484: Physics Honors Project (continued, Sp 2021)	4	n/a	n/a

University of California at Berkeley
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Senior year cont.

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Course Number & Title	Units	Grade	Textbooks Used
MA484: Mathematics Honors Project (continued, Sp 2021)	4	n/a	n/a
MA378: Introduction to the Theory of Computation (Sp 2021)	4	n/a	not yet listed
PH492: Independent Study (quantum field theory, Sp 2021)	4	n/a	Peskin & Schroeder, An Introduction to Quantum Field Theory & Shankar, Quantum Field Theory and Condensed Matter
PH401S: Senior Physics/Astronomy Seminar (Sp 2021)	0	n/a	n/a