MATHEMATICS

Courses offered by the Department of Mathematics are listed under the subject code MATH on the Stanford Bulletin's ExploreCourses web site.

The Department of Mathematics offers programs leading to the degrees of Bachelor of Science, Master of Science, and Doctor of Philosophy in Mathematics, and also participates in the program leading to the B.S. in Mathematical and Computational Science, and the M.S. and Ph.D. degree programs offered through the Institute for Computational & Mathematical Engineering.

Mission of the Undergraduate Program in Mathematics

The mission of the undergraduate program in Mathematics is to provide students with a broad understanding of mathematics encompassing logical reasoning, generalization, abstraction, and formal proof. Courses in the program teach students to create, analyze, and interpret mathematical models and to communicate sound arguments based on mathematical reasoning and careful data analysis. The mathematics degree prepares students for careers in the corporate sector, tech industry, government agencies, and for graduate programs in mathematics.

Learning Outcomes (Undergraduate)

The department expects undergraduate majors in the program to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the department's undergraduate program. Students are expected to demonstrate:

1. problem solving skills,
2. the ability to formulate proofs and to structure mathematical arguments,
3. the ability to communicate mathematical ideas via extended written presentation.

Advanced Placement in Mathematics

Students can receive units of advanced placement credit for single-variable calculus, depending on their scores on the CEEB Advanced Placement Examination or the IB Exam. See the the "Advanced Placement (http://exploredegrees.stanford.edu/undergraduatedegreesandprograms/#aptext)" section of this bulletin.

Those who have not studied single-variable calculus or have studied it partially but are not ready to begin with multivariable calculus (MATH 50-series) should begin at the single-variable course recommended by the math placement diagnostic.

Students who are ready to study multivariable calculus (based on prior coursework or exams, or recommended by the math placement diagnostic) should begin with one of the following courses:

		Units
MATH 51	Linear Algebra, Multivariable Calculus, and Modern Applications	5
MATH 52	Integral Calculus of Several Variables	5
MATH 53	Ordinary Differential Equations with Linear Algebra	5

The above sequence supplies the necessary mathematics background for most majors in science and engineering. It also provides a solid foundation for the major or minor in Mathematics, or in Mathematical and Computational Science.

Bachelor of Science in Mathematical and Computational Science

The Department of Mathematics participates with the departments of Computer Science, Management Science and Engineering, and Statistics in a program leading to a B.S. in Mathematical and Computational Science. See the "Mathematical and Computational Science (http://exploredegrees.stanford.edu/schoolofhumanitiesandsciences/mathematicalandcomputationalscience)" section of this bulletin.

Introductory and Undergraduate Courses

The department offers a year-long sequence in single-variable calculus: MATH 19, MATH 20, and MATH 21.

There are three options for studying multivariable mathematics:

1. MATH 51, MATH 52, and MATH 53 cover differential and integral calculus in several variables, linear algebra, and ordinary differential equations. These topics are taught in an integrated fashion and emphasize applications. MATH 51 covers differential calculus in several variables and introduces matrix theory and basic linear algebra; MATH 52 covers integral calculus in several variables and vector analysis; MATH 53 studies further topics in linear algebra and applies them to ordinary differential equations. This sequence is strongly recommended for incoming freshmen who have mastered single-variable calculus.
2. The sequence MATH 61CM, MATH 62CM, and MATH 63CM (Modern Mathematics: Continuous Methods) covers the material of the Math 50 series at a much more advanced level with an emphasis on rigorous proofs and conceptual arguments.
3. The sequence MATH 61DM, MATH 62DM, and MATH 63DM (Modern Mathematics: Discrete Methods) covers the same linear algebra material as the Math 60CM series and otherwise focuses on topics in discrete mathematics, algebra, and probability theory at an advanced level with an emphasis on rigorous proofs.

Learning Outcomes (Graduate)

The master's degree is conferred upon candidates who have developed advanced knowledge and skills in Mathematics. This is achieved through completion of courses, in the primary field as well as related areas, and experience with independent work and specialization.

The Ph.D. is conferred upon candidates who have demonstrated substantial scholarship and the ability to conduct independent research and analysis in Mathematics. Through completion of advanced course work and rigorous skills training, the doctoral program prepares students to make original contributions to the knowledge of Mathematics and to interpret and present the results of such research.

Bachelor of Science in Mathematics

The following department requirements are in addition to the University's basic requirements for the bachelor's degree.

Students wishing to major in Mathematics must satisfy the following requirements and complete a minimum of 64 units:

1. Department of Mathematics courses totaling at least 49 units credit; such courses must be taken for a letter grade. For the purposes of this requirement, STATS 116 Theory of Probability, PHIL 151 Metalogic, and PHIL 152 Computability and Logic count as Department of Mathematics courses.
2. Additional courses taken from Department of Mathematics courses numbered 101 and above or from approved courses in other disciplines with significant mathematical content, totaling at least 15 units credit. At least 9 of these units must be taken for a letter grade.

3. The Department of Mathematics adviser can be any member of the department's faculty.
4. To receive the department's recommendation for graduation, a student must have been enrolled as a major in the Department of Mathematics for a minimum of two full quarters, including the quarter immediately before graduation.

Students with an Advanced Placement score of 5 in BC math may receive 10 units credit and fulfill requirement '1' by taking at least 39 units of Department of Mathematics courses. Students with an Advanced Placement score of at least 4 in BC math or 5 in AB math may receive 8 units credit and fulfill requirement '1' by taking at least 41 units of Department of Mathematics courses.

Sophomore seminar courses may be counted among the choice of courses under item '1'. Other variations of the course requirements laid down above (under items '1' and '2') may, in some circumstances, be allowed. For example, students transferring from other universities may be allowed credit for some courses completed before their arrival at Stanford. However, at least 24 units of the 49 units under item '1' above and 9 of the units under item '2' above must be taken at Stanford. In all cases, approval for variations in the degree requirements must be obtained from the department's Director of Undergraduate Studies. The policy of the Mathematics Department is that no courses other than the MATH 60 series and below may be double-counted toward any other University major or minor.

Proof Writing

For students who are not experienced with writing mathematical proofs, this crucial skill can be learned by taking any one of the following courses: MATH 110 Applied Number Theory and Field Theory, MATH 113 Linear Algebra and Matrix Theory, or MATH 115 Functions of a Real Variable (after finishing the chosen calculus sequence).

Preparation for Graduate School:

It is to be emphasized that the above regulations are minimum requirements for the major; students contemplating graduate work in mathematics are strongly encouraged to include the courses MATH 116 Complex Analysis, MATH 120 Groups and Rings, MATH 121 Galois Theory, MATH 147 Differential Topology or MATH 148 Algebraic Topology, and MATH 171 Fundamental Concepts of Analysis in their selection of courses, and in addition, take at least three Department of Mathematics courses over and above the minimum requirements laid out under items '1' and '2' above, including at least one 200-level course. Such students are also encouraged to consider the possibility of taking the honors program.

Sample Course Plans

To help develop a sense of the type of course selection (under items '1' and '2' above) that would be recommended for math majors with various backgrounds and interests, see the following examples. These represent only a few of a very large number of possible combinations of courses that could be taken in fulfillment of the Mathematics major requirements:

Example 1: for students with both pure and applied interests

		Units
Single-variable calculus: AP Credit, (MATH 19, MATH 20, MATH 21) or (MATH 41, MATH 42)		8-10
Multivariable calculus: (MATH 51, MATH 52, MATH 53)		15
MATH 104 or MATH 113	Applied Matrix Theory Linear Algebra and Matrix Theory	3
MATH 106	Functions of a Complex Variable	3
MATH 109	Applied Group Theory	3
MATH 110	Applied Number Theory and Field Theory	3
MATH 115	Functions of a Real Variable	3

Plus any selection of at least eight of the following courses, including three Department of Mathematics courses:		26
MATH 107	Graph Theory	
MATH 108	Introduction to Combinatorics and Its Applications	
MATH 131P	Partial Differential Equations	
MATH 143	Differential Geometry	
MATH 146	Analysis on Manifolds	
MATH 147	Differential Topology	
MATH 148	Algebraic Topology	
MATH 152	Elementary Theory of Numbers	
MATH 161	Set Theory	
CME 108	Introduction to Scientific Computing	
ECON 50	Economic Analysis I	
PHYSICS 41	Mechanics	
PHYSICS 43	Electricity and Magnetism	
PHYSICS 45	Light and Heat	
STATS 116 or MATH 151	Theory of Probability Introduction to Probability Theory	
Total Units		**64-66**

The courses from other departments are only meant as examples; there are many suitable courses in several departments that can be taken to fulfill part or all of requirement '2'.

Example 2: for students with strong theoretical interest and considering graduate school in math

		Units
Single-variable calculus: AP Credit, (MATH 19, MATH 20, MATH 21) or (MATH 41, MATH 42)		8-10
Select one of the following multivariable calculus sequences:		15
Math 50 Series: (MATH 51, MATH 52, MATH 53). These courses are not proof-oriented.		
Math 60CM Series: (MATH 61CM, MATH 62CM, MATH 63CM). This proof-oriented sequence is called Modern Mathematics: Continuous Methods		
Math 60DM Series: (MATH 61DM, MATH 62DM, MATH 63DM). This proof-oriented sequence is called Modern Mathematics: Discrete Methods		
MATH 101	Math Discovery Lab	3
MATH 106 or MATH 116	Functions of a Complex Variable Complex Analysis	3
MATH 113	Linear Algebra and Matrix Theory	3
MATH 120	Groups and Rings	3
MATH 171	Fundamental Concepts of Analysis	3
Plus 24-26 units of math courses numbered 121 or higher (the logic courses PHIL 151 and PHIL 152 are considered to be such courses), including at least one algebra course, one analysis course, and one geometry/topology course. (See the description of the honors program below)		26
Total Units		**64-66**

In addition, those contemplating eventual graduate work in Mathematics should consider including at least one graduate-level math course such as MATH 205A Real Analysis, MATH 210A Modern Algebra I, or MATH 215A Algebraic Topology or MATH 215B Differential Topology. Such students should also consider the possibility of entering the honors program.

Example 3: for students interested in applied math

Students desiring significant computational and/or financial and/or statistical components are encouraged to also consider the Mathematics and Computational Science program.

		Units
Single-variable calculus: AP Credit, (MATH 19, MATH 20, MATH 21) or (MATH 41, MATH 42)		8-10
Select one of the following multivariable calculus sequences:		15
Math 50 Series (MATH 51, MATH 52, MATH 53). These courses are not proof-oriented.		
Math 60 Series (MATH 61DM, MATH 62DM, MATH 63DM). This proof-oriented sequence is called Modern Mathematics: Discrete Methods		
MATH 104	Applied Matrix Theory	3
MATH 106	Functions of a Complex Variable	3
MATH 107	Graph Theory	3
MATH 108	Introduction to Combinatorics and Its Applications	3
MATH 109	Applied Group Theory	3
MATH 110	Applied Number Theory and Field Theory	3
MATH 115	Functions of a Real Variable	3
MATH 131P	Partial Differential Equations	3
STATS 116	Theory of Probability	3
or MATH 151	Introduction to Probability Theory	
Plus at least 12 units of additional courses in applied mathematics, including, for example, suitable courses from the departments of Physics, Computer Science, Economics, Engineering, and Statistics.		14
Total Units		64-66

Honors Program

This option is intended for students who have strong theoretical interests and abilities in mathematics. The goal is to give students a thorough introduction to the main branches of mathematics. The honors program requires a senior thesis, which can involve either original research or expository work on advanced topics in mathematics. This option provides an excellent background with which to enter a Master's or Ph.D. program in Mathematics. Students completing the honors program are awarded a B.S. in Mathematics with Honors.

It is recommended that either sequence (MATH 61CM, MATH 62CM, MATH 63CM) or (MATH 61DM, MATH 62DM, MATH 63DM) be taken in the freshman year. To graduate with a B.S. in Mathematics with Honors, the following conditions apply in addition to the usual requirements for math majors:

1. The selection of courses under items '1' and '2' above must contain:

		Units
MATH 106	Functions of a Complex Variable	3
or MATH 116	Complex Analysis	
MATH 120	Groups and Rings	3
MATH 171	Fundamental Concepts of Analysis	3

And must also include seven additional 3-unit Math courses numbered 121 or higher. (The logic courses PHIL 151 Metalogic and PHIL 152 Computability and Logic can also be used.) These seven courses must include at least:

		Units
One Algebra Course:		
MATH 121	Galois Theory	3
MATH 122	Modules and Group Representations	3
MATH 152	Elementary Theory of Numbers	3
MATH 154	Algebraic Number Theory	3
One Analysis Course:		
MATH 136	Stochastic Processes	3
MATH 151	Introduction to Probability Theory	3
MATH 155	Analytic Number Theory	3
MATH 172	Lebesgue Integration and Fourier Analysis	3
MATH 173	Theory of Partial Differential Equations	3
MATH 175	Elementary Functional Analysis	3
One Geometry/Topology Course:		
MATH 143	Differential Geometry	3
MATH 145	Algebraic Geometry	3
MATH 146	Analysis on Manifolds	3
MATH 147	Differential Topology	3
MATH 148	Algebraic Topology	3

2. All courses counting towards the honors requirements (MATH 106/MATH 116, MATH 120, MATH 171, all 7 additional Math courses used to fulfill the major requirement, and MATH 197) must be taken for a letter grade.

3. Students must have an average GPA of at least a 3.0 across all math classes counting towards the major at the time of applying for honors to be eligible for acceptance into the honors program, as well as upon graduation to graduate with honors.

4. Majors interested in honors can apply in winter quarter of their junior year at the earliest, and no later than the last day of classes in the spring quarter of junior year.

5. Students in the honors program must write a senior thesis. In order to facilitate this, the student must, by the end of the junior year, choose an undergraduate thesis adviser from the Department of Mathematics faculty and map out a concentrated reading program under the direction and guidance of the adviser. This will occur when the student applies for honors. During the senior year, the student must enroll in MATH 197 Senior Honors Thesis with his/her adviser for a total of 6 units (recommended to be spread over three quarters), and work toward completion of the thesis under the direction and guidance of the thesis adviser. The thesis may contain original material, or be a synthesis of work in current or recent research literature. The 6 units of credit for MATH 197 Senior Honors Thesis are required in addition to the 64 units required of the major. (See the major requirements at the top of the page.)

6. The deadline for the senior thesis final draft is the Monday of week 8 of the student's graduation quarter.

In addition to the minimum requirements laid out above, it is strongly recommended that students take at least one graduate-level course (that is, at least one course in the 200 plus range). MATH 205A Real Analysis, MATH 210A Modern Algebra I, and MATH 215A Algebraic Topology or MATH 215B Differential Topology are especially recommended in this context.

Students with questions about the honors program should see the department's director of undergraduate studies.

Computer Science Theory/Discrete Mathematics Subplan

There are two pathways to achieve a Mathematics B.S. degree:

- The Mathematics bachelor's degree, or
- The Mathematics bachelor's degree with the Computer Science Theory/Discrete Mathematics subplan.

The following requirements refer to the Mathematics Bachelor's degree with the Computer Science Theory/Discrete Mathematics Subplan. Students who are interested in the Mathematics Bachelor's degree should see the Bachelor's tab (p. 1).

The Computer Science Theory/Discrete Mathematics subplan is declared on Axess; it appears on the transcript and the diploma.

Computer Science Theory/Discrete Mathematics Subplan Description

This subplan is intended for students wishing for a strong and deep background in the area of computer science theory and mathematics. The subplan could prepare students for graduate work in either area, as well as for other careers requiring particular strength in this type of thinking. The emphasis of this subplan is on theory. Students interested in a combination of mathematics and computer science more generally should consider the Bachelor of Science in Mathematical and Computational Science. Depending on their interests, students are also encouraged to consider the regular Mathematics major, the Computer Science major, and in particular, the Computer Science Theory track of the Computer Science major.

Course Requirements

The subplan requires a minimum of 64 units as outlined in requirements 1 and 2 of the Bachelor of Science in Mathematics; see the Bachelor's tab (p. 1). The selection of courses for the 64 total units must contain the required courses listed in the chart below. For the purposes of the subplan, the required Computer Science Department courses can count toward either the 49 units of Math Department courses or the 15 additional units. All required courses must be taken for a letter grade. It is highly recommended to complete the MATH 60DM sequence, although it is not required.

		Units
Required Courses		
Required Math Courses		
MATH 106	Functions of a Complex Variable	3
or MATH 116	Complex Analysis	
MATH 120	Groups and Rings	3
MATH 171	Fundamental Concepts of Analysis	3
Required CS Theory Courses		
CS 154	Introduction to Automata and Complexity Theory	3-4
CS 161	Design and Analysis of Algorithms	3-5
Additional Math Courses		
Two of the following:		6-8
MATH 61DM	Modern Mathematics: Discrete Methods	
MATH 107	Graph Theory	
MATH 108	Introduction to Combinatorics and Its Applications	
One of the following:		3-5
MATH 151	Introduction to Probability Theory	
MATH 230A	Theory of Probability I	
STATS 116	Theory of Probability	
Two of the following:		6
MATH 113	Linear Algebra and Matrix Theory	
MATH 152	Elementary Theory of Numbers	
MATH 154	Algebraic Number Theory	
MATH 155	Analytic Number Theory	
MATH 159	Discrete Probabilistic Methods	
MATH 161	Set Theory	
Additional CS Theory Courses:		

		Units
Four of the following:		12-13
CS 167		
CS 168	The Modern Algorithmic Toolbox	
CS 254	Computational Complexity	
CS 255	Introduction to Cryptography	
CS 261	Optimization and Algorithmic Paradigms	
CS 265	Randomized Algorithms and Probabilistic Analysis	
CS 268	Geometric Algorithms	
Total Units		42-50

Minor in Mathematics

To qualify for the minor in Mathematics, a student should complete, for a letter grade, at least six Department of Mathematics courses numbered 51 or higher, totaling a minimum of 24 units. For the purposes of this requirement, STATS 116 Theory of Probability, PHIL 151 Metalogic, and PHIL 152 Computability and Logic count as Department of Mathematics courses. No other courses from outside the Department of Mathematics may be used towards the minor in Mathematics.

It is recommended that these courses include:

		Units
Math Minor		
MATH 51	Linear Algebra, Multivariable Calculus, and Modern Applications	5
or MATH 61CM	Modern Mathematics: Continuous Methods	
or MATH 61DM	Modern Mathematics: Discrete Methods	
MATH 52	Integral Calculus of Several Variables	5
or MATH 62CM	Modern Mathematics: Continuous Methods	
or MATH 62DM	Modern Mathematics: Discrete Methods	
MATH 53	Ordinary Differential Equations with Linear Algebra	5
or MATH 63CM	Modern Mathematics: Continuous Methods	
or MATH 63DM	Modern Mathematics: Discrete Methods	
Plus three additional MATH courses		9
Total Units		24

At least 12 of the units applied toward the minor in Mathematics must be taken at Stanford. The policy of the Mathematics Department is that no courses other than the MATH 50/60 series and below may be double-counted toward any other University major or minor.

Master of Science in Mathematics

The University's basic requirements for the master's degree are discussed in the "Graduate Degrees (http://exploredegrees.stanford.edu/graduatedegrees)" section of this bulletin. Students should pay particular attention to the University's course requirements for graduate degrees.

University Coterminal Requirements

Coterminal master's degree candidates are expected to complete all master's degree requirements as described in this bulletin. University requirements for the coterminal master's degree are described in the "Coterminal Master's Program (http://exploredegrees.stanford.edu/cotermdegrees)" section. University requirements for the master's degree are described in the "Graduate Degrees (http://exploredegrees.stanford.edu/graduatedegrees/#masterstext)" section of this bulletin.

After accepting admission to this coterminal master's degree program, students may request transfer of courses from the undergraduate to the graduate career to satisfy requirements for the master's degree. Transfer

of courses to the graduate career requires review and approval of both the undergraduate and graduate programs on a case by case basis.

In this master's program, courses taken three quarters prior to the first graduate quarter, or later, are eligible for consideration for transfer to the graduate career. No courses taken prior to the first quarter of the sophomore year may be used to meet master's degree requirements.

Course transfers are not possible after the bachelor's degree has been conferred.

The University requires that the graduate adviser be assigned in the student's first graduate quarter even though the undergraduate career may still be open. The University also requires that the Master's Degree Program Proposal be completed by the student and approved by the department by the end of the student's first graduate quarter.

The following are specific departmental requirements:

Candidates must complete an approved course program of 45 units of courses beyond the department requirements for the B.S. degree, of which at least 36 units must be Mathematics Department courses, taken for a letter grade. The Mathematics Department courses must include at least 18 units numbered 200 or above. The candidate must have a grade point average (GPA) of 3.0 (B) over all course work taken in Mathematics, and a GPA of 3.0 (B) in the 200-level courses considered separately. Course work for the M.S. degree must be approved during the first quarter of enrollment in the program by the department's Director of Graduate Studies.

The Financial Mathematics M.S. degree program is no longer offered through the School of Humanities and Sciences. The Institute for Computational and Mathematical Engineering (ICME (https://icme.stanford.edu)) now offers a master's degree track in Mathematical and Computational Finance (http://exploredegrees.stanford.edu/schoolofengineering/instituteforcomputationalandmathematicalengineering/#masterstext).

Doctor of Philosophy in Mathematics

The University's basic requirements for the doctorate (residence, dissertation, examinations, etc.) are discussed in the "Graduate Degrees (http://exploredegrees.stanford.edu/graduatedegrees)" section of this bulletin. The following are specific departmental requirements.

To be admitted to candidacy, the student must have successfully completed 27 units of graduate courses (that is, courses numbered 200 and above). In addition, the student must pass qualifying examinations given by the department.

Beyond the requirements for candidacy, the student must complete a course of study approved by the Graduate Affairs Committee of the Department of Mathematics and submit an acceptable dissertation. In accordance with University requirements, Ph.D. students must complete a total of 135 course units beyond the bachelor's degree. These courses should be Department of Mathematics courses or approved courses from other departments. The course program should display substantial breadth in mathematics outside the student's field of application. The student must receive a grade point average (GPA) of 3.0 (B) or better in courses used to satisfy the Ph.D. requirement. In addition, the student must pass the Department area examination and the University oral examination.

Experience in teaching is emphasized in the Ph.D. program. Each student is required to complete nine quarters of such experience. The nature of the teaching assignment for each of those quarters is determined by the department in consultation with the student. Typical assignments include teaching or assisting in teaching an undergraduate course or lecturing in an advanced seminar.

For further information concerning degree programs, fellowships, and assistantships, inquire of the department's student services office.

Ph.D. Minor in Mathematics

Requirements for the Ph.D. Minor in Mathematics are:

		Units
Complete both of the following Sequences: [1, 2]		
Sequence 1		
MATH 106	Functions of a Complex Variable	3
or MATH 116	Complex Analysis	
MATH 131P	Partial Differential Equations	3
Sequence 2		
MATH 113	Linear Algebra and Matrix Theory	3
MATH 120	Groups and Rings	3
or MATH 152	Elementary Theory of Numbers	
Additional Courses		
21 units of 200-level MATH courses [3]		21
Total Units		33

[1] The 100-level courses may have been completed during undergraduate study, and their equivalents from other universities are acceptable.

[2] A third coherent sequence designed by the student, subject to the approval of the graduate committee, may be considered as a substitute for Sequence 1 or 2.

[3] The 200-level courses must be taken at Stanford and approved by the Department of Mathematics Ph.D. minor adviser.

Graduate Advising Expectations

The Department of Mathematics is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

For a statement of University policy on graduate advising, see the "Graduate Advising (http://exploredegrees.stanford.edu/graduatedegrees/#advisingandcredentialstext)" section of this bulletin.

Emeriti: Gregory Brumfiel, Gunnar Carlsson, Robert Finn, Yitzhak Katznelson, Harold Levine, Tai-Ping Liu, R. James Milgram, Donald Ornstein, Richard Schoen, Leon Simon, Ralph L. Cohen

Chair: Eleny Ionel

Professors: Daniel Bump (on leave Winter), Emmanuel Candès, Sourav Chatterjee, Brian Conrad, Amir Dembo, Persi Diaconis, Yakov Eliashberg (on leave Spring), Jacob Fox, Eleny Ionel, Steven Kerckhoff, Jun Li (on leave Autumn and Spring), Rafe Mazzeo, George Papanicolaou, Lenya

Ryzhik, Kannan Soundararajan, Richard Taylor, Ravi Vakil, András Vasy, Akshay Venkatesh (on leave), Brian White, Lexing Ying

Professor (Teaching): Tadashi Tokieda

Associate Professor: Jan Vondrák

Assistant Professors: Thomas Church, Jonathan Luk

Courtesy Professors: Moses Charikar, Renata Kallosh, Andrea Montanari

Adjunct Professors: Brian Conrey, David Hoffman

Szegö Assistant Professors: Laura Fredrickson, Or Hershkovits, Vladimir Kazeev, Michael Kemeny, Matthew Kwan, Eric Larson, Frederick Manners, Christopher Ohrt, Cheng-Chiang Tsai, Umut Varolgunes

Senior Lecturer: Mark Lucianovic

Lecturers: Sam Kimport, George Schaeffer, Wojciech Wieczorek

Visiting Lecturer: Christine Taylor

*Distinguished Poncair*é *Professor:* Henri Berestycki