## Minor in Mathematics

## A minor in the Department of Mathematics consists of completing 20 UNITS OF UPPER DIVISION MAT COURSES (excluding MAT 192, 197TC, 198, and 199) with a 2.000 GPA or higher.

Please note that you must also complete all prerequisite courses for the upper division courses you plan to take. At minimum, these include MAT 21A (Calculus: Differential Calculus), 21B (Calculus: Integral Calculus), 21C (Calculus: Partial Derivatives \& Series), and 22A (Linear Algebra). More may be required, depending on the upper division courses you plan to take.

Choose 20 units from the list below:

| MAT Course | Units | Qtr(s) Offered | Prerequisites |
| :---: | :---: | :---: | :---: |
| 108 (Intro to Abstract Math) | 4 | F, W, S, SSI, SSII | 21B |
| 111 (History of Math) | 4 | W | 8 units of upper division MAT |
| 114 (Convex Geometry) | 4 | W (even years) | 21 C and (22A or 67) |
| 115A (Number Theory) | 4 | F, SSI, SSII | 21B |
| 115B (Number Theory) | 4 | W (odd years) | 115A and (22A or 67) |
| 116 (Differential Geometry) | 4 | S | 21 D and 22B and (22A or 67 ) |
| 118A (Partial Differential Equations) | 4 | F | 21D and 22B and (22A or 67) |
| 118B (Partial Differential Equations) | 4 | W | 118A |
| 118C (Partial Differential Equations) | 4 | S (Not every year) | 118B |
| 119A (Ordinary Differential Equations) | 4 | F, W | 21 D and 22B and (22A or 67 ) |
| 119B (Ordinary Differential Equations) | 4 | S | 119A |
| 124 (Mathematical Biology) | 4 | S (even years) | 22B and (22A or 67) |
| 127A (Real Analysis) | 4 | F, W, S, SSI | 21C and (67 or (22A and 108)) |
| 127B (Real Analysis) or 125A | 4 | F, W, S, SSII | 127A |
| 127C (Real Analysis) or 125B | 4 | F, W, S, SSI | 127B |
| 128A (Numerical Analysis) | 4 | F, SSII | 21C and programming course |
| 128B (Numerical Analysis) | 4 | W | (22A or 67) and programming course |
| 128C (Numerical Analysis) | 4 | S | (22A or 67) and 22B and programming course |
| 129 (Fourier Analysis) | 4 | F | 21D and (22A or 67) and 22B and (25 or 127A) |
| 133 (Mathematical Finance) | 4 | S | 135A and (67 or (22A and 108)) |
| 135A (Probability) | 4 | F, W, S, SSI | 21C and ((25 or 127A )or 108) |
| 135B (Stochastic Processes) | 4 | S | 135A and (22A or 67) |
| 141 (Euclidean Geometry) | 4 | W, S | 21B and (22A or 67) |
| 145 (Combinatorics) | 4 | F, W, S, SSI, SSII | 21C |
| 146 (Algebraic Combinatorics) | 4 | S (Not every year) | 145 and (67 or (22A and 108)) |
| 147 (Topology) | 4 | W | 25 or 127A |
| 148 (Discrete Mathematics) | 4 | W | 67 or (22A and 108) |
| 150A (Modern Algebra) | 4 | F, W, SSI | 67 or (22A and 108) |
| 150B (Modern Algebra) | 4 | W | 150A |
| 150C (Modern Algebra) | 4 | S | 150B |
| 160 (Math for Data Analytics) | 4 | S | 167 |
| 165 (Mathematics and Computers) | 4 | F (even years) | (22A or 67$)$ and ( $(25$ or 127 A ) or 108 or 114 or 115A or 145) |
| 167 (Applied Linear Algebra) | 4 | F, W, SSI | 22A or 67 |
| 168 (Optimization) | 4 | F, W | 21C and (67 or (22A and 108)) |
| 180 (Special Topics) | 3 | F, W, S | 25 or 127A and (67 or (22A and 108)) |
| 185A (Complex Analysis) | 4 | F, W | (125A or 127B) and (67 or (22A and 108)) |
| 185B (Complex Analysis) | 4 | S (odd years) | 185A |
| 189 (Advanced Problem Solving) | 3 | S | (25 or 127A) and (67 or (22A and 108)) |

Note: Quarters offered and prerequisites are subject to change.
Questions? Email studentservices@math.ucdavis.edu

