### Mathematics Major Requirements (updated Spr21)

**Core courses** (6 credits)
- CSCI 100: Scientific Computing (or CSCI 110 if placed there)
- MATH 110: Applied Differential Calculus[^105 or placement]
- MATH 115: Theory of Differential Calculus[^110]
- MATH 120: Applied Integral Calculus[^110]
- MATH 125: Theory of Integral Calculus[^115+120]
- MATH 211: Linear Algebra [120]
- MATH 212: Multivariate Calculus [125]
- MATH 215: Transition to Advanced Mathematics (W) [115]

**Upper-level elective courses** (5 credits)
- Five full-credit MATH courses numbered above 215*

**Independent Study** (2 credits)
- MATH 451: Senior I.S. (first semester) [211+212+215+2xx/3xx]
- MATH 452: Senior I.S. (second semester) [451]

* DATA 230 or 231, and DATA 325, may count toward the elective courses  
  ^ 0.5 credits, half-semester

**Mathematics Minor** (6 credits)
- MATH 110[^105], 115[^110], 120[^120], 125[^125], 211, and three other full-credit MATH courses above 211*

* DATA 230 or 231, and DATA 325, may count toward the elective courses  
  ^ 0.5 credits, half-semester

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### Offered EVERY semester
- MATH 110: Applied Differential Calculus[^105 or placement]
- MATH 115: Theory of Differential Calculus[^110]
- MATH 120: Applied Integral Calculus[^110]
- MATH 125: Theory of Integral Calculus[^115+120]
- MATH 211: Linear Algebra [120]
- MATH 212: Multivariate Calculus [125]
- MATH 215: Transition to Advanced Mathematics (W) [115]
- CSCI 100: Scientific Computing
- CSCI 110: Imperative Problem Solving [CS110]

### FALL only
- MATH 221: Differential Equations [120+CS1xx]
- MATH 227: Operations Research [211+212@]
- DATA 231: Applied Stat Methods (W) [D102]
- MATH 329: Statistical Theory[^211+229]
- MATH 334: Abstract Algebra [211+215]

  *Offered fall of odd years (F21, F23)
  @ 212 may be taken concurrently with 227

### SPRING only
- MATH 223: Combinatorics & Graph Theory[^115/120]
- MATH 229: Probability Theory [120]
- DATA 325: Applied Data Science [D106, D23x]
- MATH 327: Numerical Analysis[^125+211+CS110]
- MATH 332: Real Analysis [211+215]
  Other 2xx/3xx courses may be offered

*Offered spring of odd years (Spr23, Spr25)
*Offered spring of even years (Spr22, Spr24)

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- Mathematics majors **may not** double major in Statistical and Data Sciences, but **may** minor in it.
- Statistical and Data Sciences majors **may** minor in math, but extra math courses are required.
- AP Calculus AB credit: 3 (M110), 4, 5 (M110, M115)
- AP Calculus BC credit: 3 (M110, 115), 4 (M110, 115, 120), 5 (M110, 115, 120, 125), or check AB subscore
Prerequisite Structure

Course Offerings Schedule

Sample Course Planning Timelines