# ADMISSION REQUIREMENTS

## I. PREREQUISITE KNOWLEDGE (choose one)
- **Mathematics:** 408D Differential & Integral Calculus, 408M Multivariable Calculus

## II. CORE REQUIREMENTS

### A. Computer Programming (choose one)
- Aerospace Engineering: 301 Intro to Computer Programming
- Biomedical Engineering: 303 Intro to Computing
- Computer Science: 313E Elements of Software Design
- Electrical Engineering: 312 Software Design & Implementation
- Geological Sciences: 325J Programming in FORTRAN & MATLAB
- Statistics & Data Sciences: 322 Intro to Scientific Programming

### B. Mathematics (choose one)
- Mathematics: 427K Advanced Calculus for Applications
- 340L Matrices & Matrix Calculations
- 341 Linear Algebra & Matrix Theory
- 362M Introduction to Stochastic Processes
- Statistics & Data Sciences: 329C Practical Linear Algebra I

## III. SCIENTIFIC COMPUTING COURSES

(Choose two categories & take one course in each)

### A. Numerical Methods
- Aerospace Engineering: 211K Engineering Computation
- Civil Engineering: 379K Computer Methods for Civil Engineering
- Chemical Engineering: 348 Numerical Methods in Chemical Engineering
- Computer Science: 323E Elements of Scientific Computing
- 323H Scientific Computing-Honors
- 367 Numerical Methods
- Statistics & Data Sciences: 335 Scientific & Technical Computing

### B. Statistical Methods
- Biomedical Engineering: 335 Engineering, Probability, & Statistics
- Economics: 329 Economic Statistics
- Electrical Engineering: 351K Probability & Random Processes
- Mathematics: 358K Applied Statistics
- 378K Intro to Mathematical Statistics
- Mechanical Engineering: 335 Engineering Statistics
- Statistics & Data Sciences: 325H Honor Statistics, 328M Biostatistics

### C. Other Computing Topics
- Computer Science: 324E Elements of Graphics & Visualization, 327E Elements of Databases
- 329E Topics in Elements of Computing, 377 Principles & Applications of Parallel Programming
- Mathematics: 346 Applied Linear Algebra
- 362M Introduction to Stochastic Processes
- 368K Numerical Methods for Applications
- 372K PDE & Applications, 376C Methods of Applied Mathematics
- Mechanical Engineering: 367S Simulation Modeling
- Management Information Systems: 325 Database Management
- Neuroscience: 366M Quantitative Methods
- Statistics & Data Sciences: 329D Practical Linear Algebra II, 374C Parallel Computing
- 374D Distributed & Grid Computing for Sci. & Engineers, 374E Visualization & Data Analysis

*Continued on reverse side*
IV. APPLIED COMPUTING COURSES

(choose one)

Aerospace Engineering: 347 Intro to Computational Fluid Dynamics

Biology: 321G Intro to Computational Bio
377J Computational Biology Lab

Computer Science: 329E Topics in Elements of Computing

Chemistry: 368 Advanced Topics in Chemistry

Biomedical Engineering:
341 Engineering Tools for Computational Genomics Lab,
342 Computational Biomechanics,
346 Computational Structural Biology,
377T Topics in Biomedical Engineering

Economics: 363C Computational Economics

Electrical Engineering: 361M Introduction to Data Mining

Finance/Statistics: (IROM) 372.6/372 Optimization Methods in Finance

Geological Sciences: 325K Computational Methods in Geological Sciences

Mathematics: 375T Topics in Mathematics, 374M Mathematical Modeling in Science & Engineering

Physics: 329 Introduction to Computational Physics

V. RESEARCH PROJECT

Statistics & Data Sciences: 2/3/479R

Undergraduate Research

POLICIES & PROCEDURES

• Return applications to GDC, Campus Mail Code: D9800
• Total of 18 hours required
• All coursework must be completed with a grade of C- or higher
• Please visit the certificate website for more detailed information on course options & policies
  • stat.utexas.edu/undergraduate/certificate-in-scientific-computation