

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

Mathematics: 348 Scientific Computation in Numerical Analysis, 368K Numerical Methods for Applications

Statistics & Data Sciences: 335 Scientific & Technical Computing

Course(s)
Fulfilled

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

Course(s)
Fulfilled

Continued on reverse side

Course(s)
Fulfilled

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