

Courses Approved for Quantitative Reasoning with Data

The following courses are approved for Harvard College's Quantitative Reasoning with Data (QRD) requirement.

QRD courses offered in a particular academic year can be found on [my.harvard](https://my.harvard.edu).

This list was most recently updated on 7 December 2021. For the most up-to-date version, please consult the [QRD page](#) on the Office of Undergraduate Education website.

For questions about the QRD requirement, e-mail qrd@fas.harvard.edu.

- APCOMP 209A Data Science 1: Introduction to Data Science
- APCOMP 209B Data Science 2: Advanced Topics in Data Science
- APMTH 10 Computing for Science and Engineering
- APMTH 22A Solving and Optimizing
- APMTH 22B Integrating and Approximating
- APMTH 50 Introduction to Applied Mathematics
- APMTH 101 Statistical Inference for Scientists and Engineers
- APMTH 120 Applied Linear Algebra and Big Data
- APMTH 121 Introduction to Optimization: Models and Methods
- APMTH 205 Advanced Scientific Computing: Numerical Methods
- APMTH 207 Advanced Scientific Computing: Stochastic Methods for Data Analysis, Inference and Optimization
- APMTH 231 Decision Theory
- APPHY 50A Physics as a Foundation for Science and Engineering, Part I
- ASTRON 2 Celestial Navigation
- COMPSCI 1 Great Ideas in Computer Science
- COMPSCI 10 Elements of Data Science
- COMPSCI 50 Introduction to Computer Science
- COMPSCI 109A Data Science 1: Introduction to Data Science
- COMPSCI 109B Data Science 2: Advanced Topics in Data Science
- COMPSCI 124 Data Structures and Algorithms
- COMPSCI 134 Networks
- COMPSCI 181 Machine Learning
- COMPSCI 282BR Topics in Machine Learning: Interpretability and Explainability
- E-PSCI 100 The Missing MATLAB Course: A Practical Intro to Programming and Data Analysis
- E-PSCI 101 Global Warming Science 101
- E-PSCI 102 Data Analysis and Statistical Inference in the Earth and Environmental Sciences
- E-PSCI 131 Introduction to Physical Oceanography and Climate

- E-PSCI 139 Paleoclimate as Prologue
- ECON 20 Introduction to Data Analysis
- ECON 50 Using Big Data to Solve Economic and Social Problems
- ECON 50A Using Big Data to Solve Economic and Social Problems with Laboratory Component
- ECON 1123 Introduction to Econometrics
- ECON 1126 Quantitative Methods in Economics
- ENG-SCI 53 Quantitative Physiology as a Basis for Bioengineering
- ENG-SCI 120 Introduction to the Mechanics of Solids
- ESE 101 Global Warming Science 101
- ESE 102 Data Analysis and Statistical Inference in the Earth and Environmental Sciences
- ESE 131 Introduction to Physical Oceanography and Climate
- GOV 50 Data
- GOV 51 Data Analysis and Politics
- GOV 52 Models
- GOV 61 Research Practice in Quantitative Methods
- GOV 1000 Quantitative Methods for Political Science I
- GOV 1010 Survey Research Methods
- GOV 1360 American Public Opinion
- GOV 2000 Introduction to Quantitative Methods I
- LIFESCI 50A Integrated Science
- LING 105 Sounds of Language
- MATH MA Introduction to Functions and Calculus I
- MATH QA Quantitative Analysis for Economics and the Social Sciences I
- MATH 1A Introduction to Calculus
- MATH 1B Calculus, Series, and Differential Equations
- MATH 18A Multivariable Calculus for Social Sciences
- MATH 18B/19B Linear Algebra, Probability, and Statistics
- MATH 19A Modeling and Differential Equations for the Life Sciences
- MATH 21A Multivariable Calculus
- MATH 21B Linear Algebra and Differential Equations
- MATH 22A Vector Calculus and Linear Algebra I
- MATH 23A Linear Algebra and Real Analysis I
- MATH 23C Mathematics for Computation, Statistics, and Data Science
- MATH 156 Mathematical Foundations of Statistical Software
- MCB 111 Mathematics in Biology
- MCB 112 Biological Data Analysis
- MCB 198 Advanced Mathematical Techniques for Modern Biology

- PHYSICI 12A Mechanics and Statistical Physics from an Analytic, Numerical and Experimental Perspective
- PHYSICI 12B Electromagnetism and Statistical Physics from an Analytic, Numerical and Experimental Perspective
- PHYSICS 15A Introductory Mechanics and Relativity
- PHYSICS 15B Introductory Electromagnetism and Statistical Physics
- PHYSICS 15C Wave Phenomena
- PHYSICS 16 Mechanics and Special Relativity
- PHYSICS 145 Elementary Particle Physics
- PHYSICS 201 Data Analysis for Physicists
- PSY 1900 Introduction to Statistics for the Behavioral Sciences
- SCIENCE 5 An Introduction to Computation for Contemporary Science
- SOCIOL 156 Quantitative Methods in Sociology
- STAT 10 Elements of Data Science
- STAT 100 Introduction to Statistics and Data Science
- STAT 102 Introduction to Statistics for Life Sciences
- STAT 104 Introduction to Quantitative Methods for Economics
- STAT 109 Intro to Statistical Modeling
- STAT 111 Introduction to Statistical Inference
- STAT 121A Data Science 1: Introduction to Data Science
- STAT 121B Data Science 2: Advanced Topics in Data Science
- STAT 131 Time Series & Prediction
- STAT 139 Linear Models
- STAT 149 Generalized Linear Models
- STAT 151 Multilevel and Longitudinal Models
- STAT 160 Design and Analysis of Sample Surveys
- STAT 186 Causal Inference
- STAT 195 Statistical Machine Learning
- STAT 220 Bayesian Data Analysis