COMPUTER SCIENCE, ECONOMICS, AND DATA SCIENCE (COURSE 6-14)

Computer Science, Economics, and Data Science (*http://catalog.mit.edu/interdisciplinary/undergraduate-programs/degrees/computer-science-economics-data-science*)

Bachelor of Science in Computer Science, Economics, and Data Science

General Institute Requirements (GIRs)

The General Institute Requirements include a Communication Requirement that is integrated into both the HASS Requirement and the requirements of each major; see details below.

Summary of Subject Requirements	Subjects
Science Requirement	6
Humanities, Arts, and Social Sciences (HASS) Requirement [between one and three subjects can be from the Departmental Program]; at least two of these subjects must be designated as communication-intensive (CI-H) to fulfill the Communication Requirement.	8
Restricted Electives in Science and Technology (REST) Requirement [can be satisfied by 6.042[J] and 18.06 in the Departmental Program]	2
Laboratory Requirement (12 units) [can be satisfied by 14.32 in the Departmental Program]	1
Total GIR Subjects Required for SB Degree	**17**

Physical Education Requirement
Swimming requirement, plus four physical education courses for eight points.

Departmental Program

Choose at least two subjects in the major that are designated as communication-intensive (CI-M) to fulfill the Communication Requirement.

Required Subjects		Units
Mathematics		
18.06	Linear Algebra	12
Computation/Algorithms		
6.0001	Introduction to Computer Science Programming in Python	6
6.009	Fundamentals of Programming [1]	12
6.006	Introduction to Algorithms	12
6.042[J]	Mathematics for Computer Science	12
6.046[J]	Design and Analysis of Algorithms	12
Economics		
14.01	Principles of Microeconomics [2]	12
14.32	Econometric Data Science	12
Introductory Probability and Statistics		
Select one of the following:		12
6.041A & 6.041B	Introduction to Probability I and Introduction to Probability II	
14.30	Introduction to Statistical Methods in Economics	
18.600	Probability and Random Variables	
Data Science		
6.036	Introduction to Machine Learning	12
Project-based		
6.UAT	Oral Communication (CI-M) [3]	9-12
or 15.276	Communicating with Data	
Select one of the following:		12
14.05	Intermediate Macroeconomics (CI-M) [4]	
14.18	Mathematical Economic Modeling (CI-M)	
14.33	Research and Communication in Economics: Topics, Methods, and Implementation (CI-M)	
Elective Subjects		
Select one of the following computer science electives:		12
6.207[J]	Networks	
15.053	Optimization Methods in Business Analytics	
Select three economics electives from the list below, including at least one subject from each group		36
Unrestricted Electives		48-57
Units in Major		183-186
Units in Major That Also Satisfy the GIRs		(48-60)
Total Units Beyond the GIRs Required for SB Degree		180-186

The units for any subject that counts as one of the 17 GIR subjects cannot also be counted as units required beyond the GIRs.

1. *6.0002 Introduction to Computational Thinking and Data Science is also an acceptable option.*
2. *14.03 Microeconomic Theory and Public Policy is also an acceptable option.*
3. *6.UAR Seminar in Undergraduate Advanced Research is also an acceptable option.*
4. *Subject has prerequisites that are outside of the program.*

Economics Electives

Select three of the following, including at least one subject from each group:		36
Data Science		

14.20	Industrial Organization and Competitive Strategy
14.27	Economics and E-Commerce
14.36	Advanced Econometrics
14.41	Public Finance and Public Policy
14.64	Labor Economics and Public Policy
14.74	Foundations of Development Policy
14.75	Political Economy and Economic Development
15.780	Stochastic Models in Business Analytics
Theory	
14.04	Intermediate Microeconomic Theory
14.12	Economic Applications of Game Theory
14.13	Psychology and Economics
14.15[J]	Networks
14.16	Strategy and Information
14.19	Market Design
14.26	Economics of Incentives: Theory and Applications
14.54	International Trade