

EXAMPLE PATHWAYS

Data Science Master's Degree Program

10 Online Courses:

- 2 Admission Courses
- 4 Core Courses
- 4 Electives

1 On-Campus Precapstone Course

1 Online Capstone Course

Explore several examples of how you might progress through the program at a pace that works for you.

- 2-year accelerated pathway: Illustrates how a student might complete the program on an intensive timeline, taking a full course load each term.
- 3-year steady pace pathway: Demonstrates a steady, year-round pace that supports consistent progress while balancing work and study.
- 4-year extended pathway: Reflects a more flexible approach, allowing lighter course loads or breaks between semesters.

Each pathway represents one possible way to structure your studies. Your path will depend on your goals and schedule. Courses listed here are examples; availability may vary by year.

Learn more about the [data science program courses and degree requirements](#).



Harvard Extension School

HARVARD DIVISION OF CONTINUING EDUCATION



2-Year Pathway

This accelerated pathway illustrates how a student can fast-track their studies, balancing multiple courses in back-to-back terms.

Completing the **admission courses** in the same term is intensive; consider the course load and your schedule before deciding how quickly to begin.

The summer precapstone and fall capstone sequence suits both U.S. and international students.

Year 1

Spring

2 Courses

- **Admission Course**
Statistical Data Modeling
- **Admission Course**
Foundations of Data Science and Engineering

MILESTONE:

- Submit your application while completing the courses for admission (application period open March 15–April 15).

Summer

2 Courses

- **Core Course**
Example: Elements of Data Science and Statistical Learning with R
- **Elective Course**
Example: Deep Learning

MILESTONES:

- Celebrate admission. Decisions released in June.
- Connect with an academic advisor to plan your degree path.

Fall

3 Courses

- **Core Course**
Example: Introduction to Data Science
- **Core Course**
Example: Data Engineering for Analytics to Solve Business Challenges
- **Elective Course**
Example: Data Mining, Discovery, and Exploration

MILESTONE:

- Convocation. Join us on campus for a celebration with fellow degree candidates.



2-Year Pathway

Year 2

Spring

3 Courses

- **Core Course**

Example: Advanced Topics in Data Science

- **Elective Course**

Example: Data Science and Artificial Intelligence Ethics, Governance, and Laws

- **Elective Course**

Example: Artificial Intelligence, the Internet-of-Things, and Cybersecurity

Summer

Precapstone Course

MILESTONE:

- On-campus experience. In a 3-week course, collaborate with your project team, industry partner, and faculty on a capstone plan.

International students: Plan ahead for necessary visa and travel logistics.

Fall (Final Term)

Capstone Course

MILESTONE:

- Complete your capstone project & fulfill your degree requirements for graduation.

Graduation (May)

Join your peers on campus to celebrate at Harvard University Commencement.

Stay engaged through the Harvard Alumni Association and Harvard Extension School Alumni Association.



3-Year Pathway

This sample plan illustrates a steady pace, with the admission courses taken separately in back-to-back terms. The path includes a January precapstone and spring capstone sequence (*the January precapstone course is only available to U.S. students*).

Year 1

Fall

1 Course

- **Admission Course**
Foundations of Data Science and Engineering

MILESTONES:

- Earning your way in. Complete your first course for admission.
- Connect with a predegree and admissions advisor for support during the admission process.

Spring

1 Course

- **Admission Course**
Statistical Data Modeling

MILESTONE:

- Submit your application while taking your second admission course (application period open March 15–April 15).

Summer

1 Course

- **Core Course**
Example: Data Science and Artificial Intelligence Ethics, Governance, and Laws

MILESTONES:

- Celebrate admission. Decisions released in June.
- Connect with an academic advisor to plan your degree path.



3-Year Pathway

Year 2

Fall

2 Courses

- **Core Course**
Example: Dynamic Modeling and Forecasting in Big Data
- **Core Course**
Example: Elements of Data Science and Statistical Learning with R

MILESTONE:

- Convocation. Join us on campus for a celebration with fellow degree candidates.

Spring

2 Courses

- **Core Course**
Example: Foundations of Large Language Models
- **Elective Course**
Example: Artificial Intelligence, the Internet-of-Things, and Cybersecurity

Summer

1 Course

- **Elective Course**
Example: Data Mining, Discovery, and Exploration



3-Year Pathway

Year 3

Fall

2 Courses

- **Elective Course**

Example: Database Systems

- **Elective Course**

Example: Data Engineering for Analytics to Solve Business Challenges

January

Precapstone Course

MILESTONE:

- On-campus experience. In a 3-week course, collaborate with your project team, industry partner, and faculty on a capstone plan.

Spring (Final Term)

Capstone Course

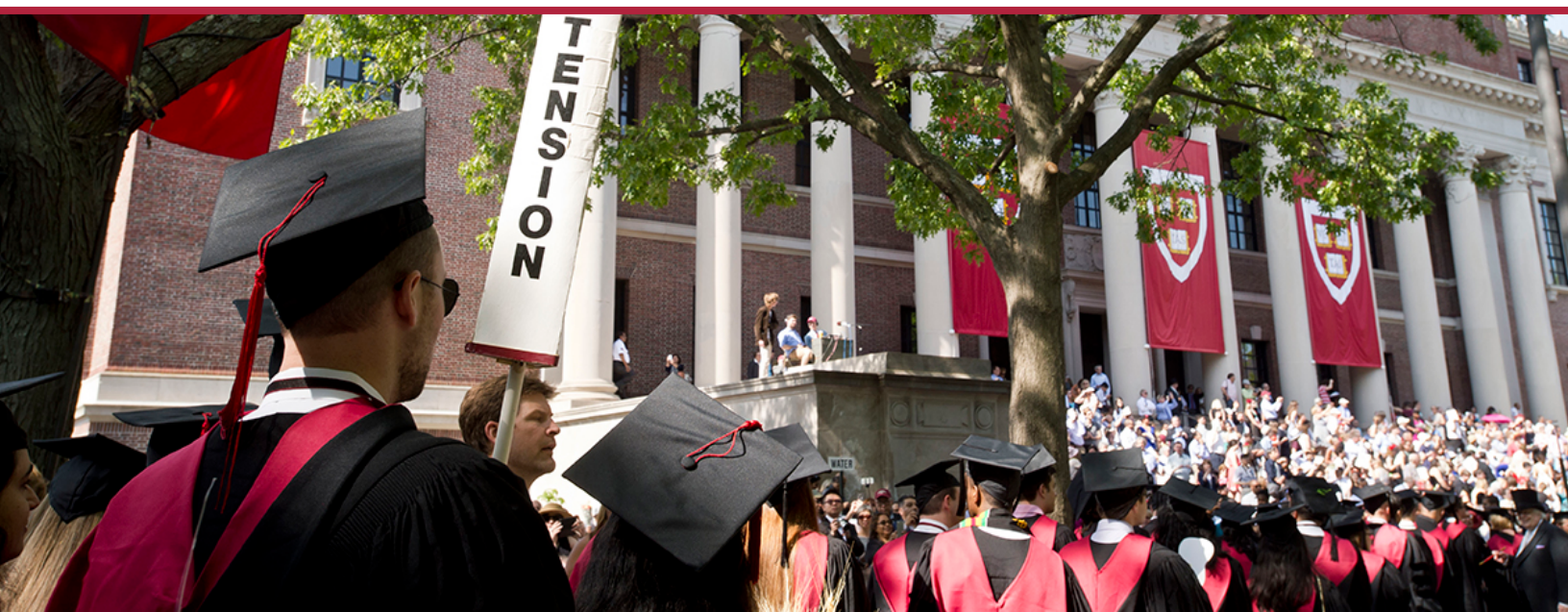
MILESTONE:

- Complete your capstone project & fulfill your degree requirements for graduation.

Graduation (May)

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4-Year Pathway

This extended pathway represents a flexible, part-time pace, with online courses taken only in the fall and spring semesters. It culminates in a summer precapstone and fall capstone sequence — ideal for both U.S. and international students.

Year 1

Fall

1 Course

- **Admission Course**
Foundations of Data Science and Engineering

MILESTONES:

- Earning your way in. Complete your first course for admission.
- Connect with a predegree and admissions advisor for support during the admission process.

Spring

1 Course

- **Admission Course**
Statistical Data Modeling

MILESTONE:

- Submit your application while taking your second admission course (application period open March 15–April 15). Admission decisions released in June.



4-Year Pathway

Year 2

Fall

2 Courses

- **Core Course**
Example: Fundamentals of Data Science II
- **Elective Course**
Example: Deep Learning

MILESTONE:

- Convocation. Join us on campus for a celebration with fellow degree candidates.
- Connect with an academic advisor to plan your degree path.

Spring

2 Courses

- **Core Course**
Example: Foundations of Large Language Models
- **Elective Course**
Example: Elements of Data Science and Statistical Learning with R

Summer

1 Course

- **Elective Course**
Example: Data Science and Artificial Intelligence Ethics, Governance, and Laws



4-Year Pathway

Year 3

Fall

2 Courses

- **Core Course**
Example: Dynamic Modeling and Forecasting in Big Data
- **Core Course**
Example: Data Systems

Spring

1 Course

- **Elective Course**
Example: Artificial Intelligence, the Internet-of-Things, and Cybersecurity

Summer

Precapstone Course

MILESTONE:

- On-campus experience. In a 3-week course, collaborate with your project team, industry partner, and faculty on a capstone plan.
- International students: Plan ahead for necessary visa and travel logistics.*

Year 4

Fall (Final Term)

Capstone Course

MILESTONE:

- Complete your capstone project & fulfill your degree requirements for graduation.

Graduation (May)

- Join your peers on campus to celebrate at Harvard University Commencement.
- Stay engaged through the Harvard Alumni Association and Harvard Extension School Alumni Association.

