Data Science

UNIVERSITY OF COLORADO **BOULDER**

Student Handbook

Master of Science in Data Science
(MS-DS) on Coursera

2023 Fall 1 – 2024 Summer 2

Contents

Welcome

Welcome to the Master of Science in Data Science (MS-DS), a cutting-edge program designed for the twenty-first century. Hosted on the internationally acclaimed Coursera learning platform, the MS-DS program offers graduate-level courses, a Graduate Certificate in Data Science, and a fully accredited Master's Degree in Data Science. The fully online MS-DS on Coursera presents three major innovations for students:

- **Access.** The MS-DS is designed to provide global access to graduate-level education. It seeks to educate the world. To this end it uses *performance-based admissions* rather than traditional admissions standards. Anyone who can complete the work of a graduate-level data science course is welcome to enroll in our degree.

- **Curriculum.** The MS-DS curriculum is both modular and self-directed. The data science professors have purposely broken down their semester-long courses into one-credit classes and, although classes can naturally fit together in sequence, we encourage our students to construct their degree plan as needed. Note the degree requires students to complete 21 credits of core courses and 9 credits of elective courses. The degree will also contain graduate certificates that register content-area mastery.The MS-DS curriculum is made up of a broad variety of courses in areas across data science and students will gain a deep understanding of data science through statistics, computer science, and information science and will apply these skills to a variety of domains.

- **Learning.** The MS-DS is guided by the belief that learning belongs to the learner. To be successful in the MS-DS each student must commit to his or her learning by creating a clear plan of courses, a schedule for study, and a strategy for taking courses.

As an essential part of learning strategy, we recommend that students explore the courses in non-credit format before taking them for credit. By beginning a course in a non-credit format before switching to credit, students can see if the course content and instructor's style fit their learning plan. See How It Works for more information on upgrading from the non-credit to for-credit experience.

CU Boulder stands fully behind the degree. Students taking the MS-DS on Coursera earn the same credentials as students enrolled on campus. There are no designations on official CU transcripts, diplomas, or certificates that this is an online program offered on the Coursera platform.

The program specifics are reviewed on the Data Science department webpage. This document provides students with the policies governing the MS-DS. This document provides students with the policies governing the MS-DS degree. CU graduate degree programs are governed by the University's and Graduate School's rules, policies, and procedures. The MS-DS on Coursera is also subject to CU Boulder policies governing degrees hosted on Coursera as well as program-specific policies outlined in this student handbook (updated annually).

We welcome student contact:

- Prospective students and students enrolled in non-credit courses may contact us at datascience@colorado.edu .
- Students enrolled in for-credit courses may contact their Course Facilitators or their MS-DS graduate advisor at msds-support@colorado.edu with questions.

We are proud for you to join our community and forge a new kind of education for the twenty-first century. Welcome to CU Boulder's Master of Science in Data Science program on Coursera.

Admissions

There is no traditional application for admission for these programs. Students do not need to take the Graduate Record Examination (GRE) or English proficiency exams like the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS). They never need to submit letters of recommendation or application essays. Neither a prior degree nor university transcripts are required for admission. Because these are purely online programs, students do not need to complete a background check to enroll.

The MS-DS on Coursera program uses **performance-based admissions** for enrollment, which means students earn program admission simply by performing well in a three-course pathway.

Specifically, a student pursuing admission to the MS-DS degree program must complete the following four steps:

1. Earn at least a grade of C in each of the for-credit courses listed below within one of the following three-course pathways:

   Foundations of Data Structures and Algorithms Pathway (3 credits)
   - DTSA 5501: Algorithms for Searching Sorting and Indexing
   - DTSA 5502: Trees and Graphs – Basics
   - DTSA 5503: Dynamic Programming and Greedy Algorithms

   Data Science Foundations: Statistical Inference Pathway (3 credits)
   - DTSA 5001: Probability Theory – Foundation for Data Science
   - DTSA 5002: Statistical Inference for Estimation in Data Science
   - DTSA 5003: Statistical Inference and Hypothesis Testing in Data Science Applications

2. Achieve a computed pathway grade point average (GPA) of at least 3.00.

3. Have a cumulative GPA of at least 3.00 for all for-credit courses taken to date.

4. Declare their intent to seek the degree via the Enrollment Form, which they can do while enrolling in any for-credit course during any enrollment period. This can be before, during, or after starting work in a pathway.

Upon completion of these four steps the student is admitted to the MS-DS degree program. Students may successfully complete a designated pathway specialization and declare their intent to seek the degree at any point in their academic journey. Completion of a pathway specialization is not required for students to begin earning academic credit, only to earn the degree. Pathway courses are a required part of the curriculum, allowing students to make direct progress toward the degree while working toward program admission. To remain in good standing in the program, students must earn a cumulative GPA of 3.00 or higher.

Non-degree-seeking students may also enroll in for-credit courses. All courses attempted and/or completed for credit will appear on an official CU Boulder transcript (unless dropped by the drop deadline) and will count toward the cumulative GPA. See Course Drops, Tuition Refunds, Withdrawals & Grades for details.

Curriculum & Requirements

Graduate Certificates

A graduate certificate is a sequence of courses totaling 9-12 credit hours that has been approved by the Graduate School at CU Boulder. Students may enroll in graduate certificates as either non-degree-seeking or degree-seeking students.

CU certificates on Coursera are **stackable**, meaning degree-seeking students can count credits first earned as part of a CU certificate toward the 30-credit MS-DS degree, as well.

All CU certificates on Coursera require students to earn a cumulative certificate GPA of 3.00 or higher before conferral. Individual certificates may have additional requirements.

It is your responsibility to ensure you take courses in the correct order to earn the certificates you are most interested in. Multiple certificates may require the same courses, and *you cannot double count courses between multiple certificates*. CU certificates on Coursera are automatically conferred once all requirements are met. After graduation, credit that has been applied toward the degree cannot be applied toward additional certificates.

Graduate certificate credentials are conferred by the CU Boulder campus.

Data Science Graduate Certificate

To earn the Data Science Graduate Certificate, students must complete **12 credit** hours of coursework.

Students <u>must</u> complete the following **required** courses (6 credits):

Data Mining Foundations and Practice (3 credits)
- DTSA 5504: Data Mining Pipeline
- DTSA 5505: Data Mining Methods
- DTSA 5506: Data Mining Project

Data Science Foundations: Statistical Inference (3 credits)
- DTSA 5001: Probability Theory – Foundation for Data Science
- DTSA 5002: Statistical Inference for Estimation in Data Science

- DTSA 5003: Hypothesis Testing for Data Science

Students must complete an additional 6 credits and can choose to complete any 2 of the following 3 specializations (6 credits):

Introduction to Statistical Learning for Data Science (3 credits)

- DTSA 5020: Statistical Learning for Data Science: Regression and Classification
- DTSA 5021: Statistical Learning for Data Science: Resampling, Selection and Splines
- DTSA 5022: Statistical Learning for Data Science: Trees, SVM, and Unsupervised Learning

Machine Learning (3 credits)

- DTSA 5509: Introduction to Machine Learning – Supervised Learning
- DTSA 5510: Unsupervised Algorithms in Machine Learning
- DTSA 5511: Introduction to Deep Learning

Statistical Modeling for Data Science (3 credits)

- DTSA 5011: Modern Regression Analysis in R
- DTSA 5012: ANOVA and Experimental Design
- DTSA 5013: Generalized Linear Models and Nonparametric Regression

In order to earn a certificate, students must receive a minimum grade of a C or higher in each course. The cumulative GPA for certificate courses must be 3.0 or higher.

Certificates from Other CU Boulder Degrees on Coursera ("Outside Certificates")

MS-DS on Coursera students may currently pursue CU Boulder graduate certificates on Coursera offered by the Master of Engineering in Engineering Management (ME-EM) on Coursera and the Master of Science in Electrical Engineering (MS-EE) on Coursera programs.

You must officially declare your intent to pursue any certificate offered by another CU degree on Coursera before graduation and within two years of completing all requirements for that certificate. To officially declare your intent to pursue one of these outside certificates, you simply need to enroll in at least one course via the enrollment form for that certificate's home program. For example, to earn the

Engineering Management Graduate Certificate offered by the ME-EM on Coursera program, you must enroll in at least one course via the ME-EM enrollment form.

Master's Degree

Degree Requirements

Degree requirements in effect per the Special Programs section of the University Catalog at the time of your admission to the MS-DS on Coursera degree program will apply to you during your course of study. Any revisions to the requirements after the term that you are officially admitted to the MS-DS on Coursera will not apply to you retroactively. Use the University Catalog for the term you were admitted to the program until you graduate, since that governs your graduation requirements.

The MS-DS requires a minimum of 30 credit hours of approved, degree-eligible graduate-level coursework and a minimum cumulative grade-point average (GPA) of 3.00. This includes 21 credits of core coursework and a choice of 9 credits of elective coursework from the options listed below (Note: up to six credits from other CU Boulder degrees on Coursera can be applied toward MS-DS elective credit requirements. See Other Elective Courses ("Outside Electives") for details.) Courses in which grades below C (2.0) are received may not be applied toward the degree but will count toward the cumulative GPA.

Courses may not be double counted toward two credentials of the same level. This means students can apply credit from a particular course toward one graduate certificate and one graduate degree, but they cannot apply credit from a particular course toward two graduate certificates or two graduate degrees. CU degrees and certificates on Coursera are automatically conferred once all requirements are met.

Indicates a cross-listed course offered under two or more programs (e.g., Dynamic Programming, Greedy Algorithms is offered as both DTSA 5503 and CSCA 5414). You may not earn credit for more than one version of a cross-listed course.

Core Courses (21 credits)

Students must complete the required core courses for a total of 21 credits.

- **Foundations of Data Structures and Algorithms (3 credits)**
  - DTSA 5501: Algorithms for Searching, Sorting, and Indexing

- o DTSA 5502: Trees and Graphs: Basics
  - o DTSA 5503: Dynamic Programming, Greedy Algorithms – CSCA 5414*
- **Data Science Foundations: Statistical Inference for Data Science (3 credits)**
  - o DTSA 5001: Probability Theory: Foundation for Data Science
  - o DTSA 5002: Statistical Inference for Estimation in Data Science
  - o DTSA 5003: Hypothesis Testing for Data Science
- **Vital Skills for Data Scientists (4 credits)**
  - o DTSA 5301: Data Science as a Field
  - o DTSA 5302: Cybersecurity for Data Science
  - o DTSA 5303: Ethical Issues in Data Science
  - o DTSA 5304: Fundamentals of Data Visualization – CSCA 5702*
- **Machine Learning (3 credits)**
  - o DTSA 5509: Introduction to Machine Learning: Supervised Learning – CSCA 5622*
  - o DTSA 5510: Unsupervised Algorithms in Machine Learning – CSCA 5632*
  - o DTSA 5511: Introduction to Deep Learning – CSCA 5642*
- **Statistical Modeling (3 credits)**
  - o DTSA 5011: Modern Regression Analysis in R
  - o DTSA 5012: ANOVA and Experimental Design
  - o DTSA 5013: Generalized Linear Models and Nonparametric Regression
- **Data Mining Foundations and Theory (3 credits)**
  - o DTSA 5504: Data Mining Pipeline – CSCA 5504*
  - o DTSA 5505: Data Mining Methods – CSCA 5512*
  - o DTSA 5506: Data Mining Project – CSCA 5522*
- **Databases (2 credits)**
  - o DTSA 5733: Relational Database Design
  - o DTSA 5734: The Structured Query Language (SQL)

Cross-listed Courses

Cross-listed Courses are offered under two or more programs (e.g., Dynamic Programming, Greedy Algorithms is offered as both DTSA 5503 and CSCA 5414). They are considered equivalent when evaluating progress toward degree requirements. You may not earn credit for more than one version of a cross-listed course. All cross-listed courses are indicated with a * under Core Courses and Elective Courses.

Elective Courses (9 credits)

Students must complete 9 credits of elective coursework. They can choose from the following course options (Note: up to six credits from other CU Boulder degrees on

Coursera can be applied toward MS-DS elective credit requirements. See Other Elective Courses ("Outside Electives") for details.)

- **Software Architecture for Big Data (3 credits)**
    - DTSA 5507: Fundamentals of Software Architecture for Big Data – CSCA 5008*
    - DTSA 5508: Software Architecture Patterns for Big Data – CSCA 5018*
    - DTSA 5714: Applications of Software Architecture for Big Data – CSCA 5028*
- **High-Performance and Parallel Computing (1 credit)**
    - DTSA 5701: Introduction to High-Performance and Parallel Computing
- **Data Science Methods for Quality Improvement (3 credits)**
    - DTSA 5704: Managing, Describing, and Analyzing Data
    - DTSA 5705: Stability and Capability in Quality Improvement
    - DTSA 5706: Measurement System Analysis
- **Deep Learning Applications for Computer Vision (1 credit)**
    - DTSA 5707: Deep Learning Applications for Computer Vision – CSCA 5812*
- **Effective Communication (2 credits)**
    - DTSA 5842: Effective Communication: Writing, Design and Presentation
    - DTSA 5843: Effective Communication Capstone Project
- **Statistical Learning for Data Science (3 credits)**
    - DTSA 5020: Regression and Classification
    - DTSA 5021: Resampling Selection and Splines
    - DTSA 5022: Trees, SVM, and Unsupervised Learning
- **Text Marketing Analytics (3 credits)**
    - DTSA 5798: Supervised Text Classification for Marketing Analytics
    - DTSA 5799: Unsupervised Text Classification for Marketing Analytics
    - DTSA 5800: Network Analysis for Marketing Analytics

The MS-DS program will continue to roll out additional electives that will be available for selection. Please see the Curriculum page for up-to-date information on additional data science electives that can be applied toward the required 9 elective credits.

Cross-listed Courses

Cross-listed Courses are offered under two or more programs (e.g., Dynamic Programming, Greedy Algorithms is offered as both DTSA 5503 and CSCA 5414). They are considered equivalent when evaluating progress toward degree requirements. You may not earn credit for more than one version of a cross-listed course.

Other Elective Courses ("Outside Electives")

Up to **six** graduate-level credit hours of courses offered by other CU degrees on Coursera may be applied as elective credits toward the MS-DS on Coursera degree. **Only courses listed below** may be applied as elective credit toward the MS-DS degree. Courses must be graduate level and meet all applicable academic standards and may not be double counted toward two credentials of the same level. Only courses offered by other CU degrees on Coursera may be used.

Engineering Management Electives (Master of Engineering in Engineering Management on Coursera)

- **Project Management Courses**
    - EMEA 5031: Project Management: Foundations and Initiation
    - EMEA 5032: Project Management: Project Planning and Execution
    - EMEA 5033: Project Management: Agile Project Management
- **Product Development Courses**
    - EMEA 5021: Finance for Technical Managers: Product Cost and Investment Cash Flow Analysis
    - EMEA 5022: Finance for Technical Managers: Project Valuation and the Capital Budgeting Process
    - EMEA 5023: Finance for Technical Managers: Financial Forecasting and Reporting

Computer Science Electives (Master of Science in Computer Science on Coursera)

All MS-CS on Coursera courses (CSCA) will be accepted as outside electives (within the credit limits listed above) except for courses that are not applicable to the MS-DS degree and those that are cross-listed.

Credit from the following courses *cannot* be applied toward MS-DS on Coursera requirements:

- CSCA 5214: Computing, Ethics, and Society Foundations
- CSCA 5224: Ethical Issues in AI and Professional Ethics
- CSCA 5234: Ethical Issues in Computing Applications

Courses that begin with a "DTSA" prefix and courses that are cross-listed with a DTSA-prefixed course are not considered outside electives and do not count against this six-credit limit.

Students wishing to complete degrees in more than one program must complete all the requirements for both degrees with no shared or overlapping course work.

Non-Credit and For-Credit Experiences on Coursera

Non-Credit & Coursera Completion Certificates

All MS-DS courses are hosted on the Coursera platform. A typical non-credit **course** includes content, discussion forums, and homework assignments of level and scope similar to assignments made in an equivalent on-campus course in the same subject. Many of the courses are organized into sequences called **specializations,** a series of courses linked together to cover a topic more fully. Non-credit students may use specializations to earn course and specialization completion certificates from Coursera, but non-credit courses and specializations do not carry CU Boulder credit and are not recorded on CU Boulder transcripts.

Non-credit courses taught by CU Boulder Data Science faculty are the foundation of for-credit courses taught by those same faculty. A course is not considered credit-bearing until a student enrolls in the for-credit session of the course by paying CU Boulder tuition. Enrolling in the for-credit session enables access to additional credit-bearing content and proctored assessments.

A student enrolled in a non-credit version of an MS-DS on Coursera course may elect to pay tuition and upgrade to the for-credit version of the course at any time in their learner journey. However, MS-DS credits are only applicable to the MS-DS degree for up to eight years; after that point, students must re-enroll and pay tuition for any expired credits that are required for graduation. (See Time Limit for details.)

Work performed in the non-credit portion of the course (e.g., assignments and quizzes) automatically transfers with the student to the for-credit option, and the student can then continue to complete any remaining homework, exams, projects, and lessons. Due to their interactive nature, discussion board posts and peer-graded assignments may not transfer from session to session if you drop/withdraw and later re-enroll in a particular class. Be sure to save your work outside of the Coursera platform.

Students may upgrade from non-credit to for-credit at any time during the enrollment window via the enrollment form. Each enrollment period begins two weeks before the first day of class and ends two weeks before all coursework is due. In addition, please note the following:

1. All for-credit coursework is due by the last day of the session.
2. Previously completed assignments will be automatically applied to your for-credit experience.
3. Prior to accessing for-credit content for the first time, you must activate/link your student accounts and pass a short (4–5 hour) non-credit onboarding course. You only need to complete these steps once.
4. Please note that if you start a non-credit course within the same month that you upgrade to the for-credit version, you will not receive a refund for the monthly subscription associated with the non-credit course. The monthly subscription fee is paid to Coursera, not to the University of Colorado Boulder.

For Credit & CU Boulder Credentials

A course is not considered credit-bearing until a student enrolls in the for-credit session of the course by paying CU Boulder tuition. Enrolling in the for-credit session enables access to additional credit-bearing content and assessments.

For-credit CU Boulder courses on Coursera may include proctored assessments or use project-based assignments.

Individuals may take for-credit CU Boulder courses on Coursera as either **non-degree-seeking** students (in which case they do not seek admission to the MS-DS degree) or as **degree-seeking** students (in which case they have followed the four steps to enroll in the MS-DS degree listed above).

Prerequisites & Assumed Background Knowledge

There are no course prerequisites or corequisites for MS-DS courses. Nevertheless, it is important that students are prepared for individual courses. Course descriptions will advise students of assumed incoming knowledge, and students are strongly encouraged to take course sequences in the order they are presented on the Coursera platform. *Students are also encouraged to take a non-credit version in some form before moving to the for-credit version to test whether they can succeed, especially if they are unsure whether they have the background knowledge required for a course.*

Courses & Credit Hours

Each MS-DS course on Coursera with a "DTSA" prefix is worth one credit hour. Elective courses offered by other CU degrees on Coursera like the ME-EM on Coursera, and the

MS-CS on Coursera programs may offer different credit hour amounts. It is your responsibility to track your progress and ensure you meet all graduation requirements.

Individual courses in the program have an anticipated completion timeline of between four and six weeks. The program's credit hour system reflects its commitment to maintaining the rigor of the on-campus experience in an online setting by narrowing and focusing the content on a specific topic.

Calendar & Course Sessions

Non-credit course sessions are typically self-paced with assignment due dates programmed and updated by the Coursera platform.

For-credit sessions run in 8-week increments throughout the calendar year, so students have the ability to upgrade and take a course for credit, complete coursework and any additional for-credit requirements, and earn credit and a grade in a fashion approximating an on-demand service.

Students enrolled in a for-credit session will be expected to complete and submit work by the 8-week session end date. At the end of a for-credit session, the session closes; all enrolled students are assigned a letter grade.

We look forward to each student succeeding in this program. To that end, we recommend students take a lighter course load for their first 8-week session—enrolling in only 1 or 2 courses. By doing so, students can best determine time commitment and workload. This allows students to get a better idea of how to plan for future sessions.

Students who want to complete the degree in 2 years need to take 2–3 courses per 8-week session.

Calendar for Proctored Exams and Projects

MS-DS courses on Coursera may use ProctorU to proctor tests and exams. Students in MS-DS courses can complete final exams and projects that use the ProctorU remote proctoring service in each session starting at **9:00 am Mountain Time** on the day classes begin and ending at **4:50 pm Mountain Time** on the day classes end.

You must schedule your proctored experience at least 72 hours in advance of your desired day and time. For example, if the ProctorU availability window closes at 4:50 pm

on a Friday, the last time you could schedule a proctored exam or project would be at 4:50 pm that Tuesday.

To secure your desired proctoring session time, log into ProctorU to schedule your session as soon as you know your desired session date and time.

View the Calendar for each session to see deadlines for scheduling and completing proctored exams and projects.

Financial Information

Tuition

Tuition is assessed at a linear rate based on credit hours and may vary by program. Please refer to the Bursar Office's website for officially published tuition rates. Students are granted access to for-credit components of a course after their tuition has been paid and verified.

For accepted payment methods, please refer to the Bursar's Degrees on Coursera.

Tuition payments cannot be rolled over to future sessions.

If a tuition payment does not process successfully and/or students have a past due balance, a financial hold is placed on the student's account and the student will be prevented from registering for future courses at CU Boulder until the past due amount is paid in full. Former or current CU Boulder students wishing to enroll in MS-DS on Coursera courses who have unpaid debts may have these debts deducted from payments made to the MS-DS on Coursera program and before MS-DS on Coursera tuition charges are paid. If applicable, the students may be dropped from enrolled classes for non-payments or invalid payments. The Bursar's Office will collect on the unpaid balance according to the Bursar's Office collection policies.

If a student enrolled in the MS-DS on Coursera program wishes to take additional courses on Main Campus or through Continuing Education, they must enroll through the appropriate channels and will be charged separately for those courses. Students will also be required to pay the required mandatory fees associated with their new enrollment.

The CU Employee Tuition Assistance Benefit cannot be applied towards the MS-DS on Coursera program.

MS-DS on Coursera courses are not eligible for coverage by RA/TA waivers.

Courses taken in B3 programs are eligible for 3rd party sponsorship. The students are required to make a payment at the time of enrollment request. The students will receive a refund once the University receives the sponsorship authorization, and the sponsorship applies to the student accounts.

The tuition dispute is available for the students in B3 programs, refer to the Bursar's Office website tuition dispute process. The non-attendance cannot be used as a reason for tuition dispute for B3 programs.

Student Fees

Currently, there are no student fees charged to students in the MS-DS on Coursera program. Course tuition also includes access to CU on Coursera, Digital Library resources, the Handshake online employment platform and networking tool, the VMock online resume review service, and the Forever Buffs alumni association.

Other Fees

Students who enroll in for-credit MS-DS on Coursera courses and pay tuition do not need to pay for a Coursera subscription. Currently, students do not need to pay for exam proctoring costs. Students may be charged on an at-cost basis for such items as credit card fees.

Financial Aid

At this time, no financial aid will be administered for the MS-DS on Coursera program.

Transfer of Credit

Due to the pilot nature of this program, credit earned at other institutions or in other programs at the University of Colorado Boulder are not transferable to the MS-DS.

Credits taken as part of the MS-DS program may be transferred to other CU Boulder graduate degree programs at the discretion of the program and of the Graduate School in accordance with program-specific requirements and Graduate School rules.

Other institutions may accept transfer credit from the MS-DS program at their discretion, based upon their transfer of credit standards.

Changing Degree Programs

Students may change degree programs by following the steps outlined in this section. Students are responsible for understanding possible consequences of changing programs *before* they take the steps below.

1. Be sure you understand the differences between your current degree program and the program you are hoping to change to.
    *   **Degree structure**: CU Boulder degrees on Coursera share a similar structure that uses performance-based admission, pay-as-you-go tuition, and options for both non-credit and for-credit experiences.
    *   **Recommended prerequisite knowledge**: Though CU degree programs on Coursera do not have formal prerequisite requirements, each program lists particular subjects that you should be familiar with to be successful.
    *   **Admissions requirements**: Ensure you understand the available pathway courses, as well as grade and GPA requirements for both programs.
    *   **Curriculum**: Make sure you understand if and how any coursework you have completed will apply to the new degree program you are considering. Determine how any Cross-listed Courses or Other Elective Courses ("Outside Electives") you have already completed will affect your degree progress.
    *   **Grade requirements:** Programs may have different minimum grade requirements for admission and graduation. For example, the MS-DS requires a C or better on all courses for graduation (and a 3.0 pathway GPA for admission), whereas the MS-CS requires a B or better on all breadth courses and a C or better on all elective courses for graduation (and a B or better on each pathway course for admission). All programs require students to maintain a 3.0 cumulative GPA for admission and graduation.
    *   **Tuition:** Tuition rates vary by program.

2. Indicate your change in degree interest properly, as noted below:
    *   DO indicate degree interest on your new enrollment form. Start using your new degree enrollment form to select, enroll in, and pay for for-credit courses. Indicate that you are interested in pursuing a degree on your new enrollment form.

- DO NOT indicate degree interest on the old enrollment form. There is a question on every program's enrollment form asking if you would like to officially declare your intent to pursue a degree from that program and be considered for degree admission. Please do NOT select this option if you intend to pursue a different degree. If you indicate degree interest on your previous program's enrollment form, you will need to complete extra steps later to change your degree choice.
- If you already officially indicated you were interested in pursuing a degree from your previous program on the enrollment form, you must take additional steps to change your degree:
    - Start using the new enrollment form to select, enroll in, and pay for for-credit courses.
    - Indicate you are interested in officially pursuing a degree in your new program on this new enrollment form. (Note that this alone will not change your program.)
    - Email reg-specialprograms@colorado.edu to request a program change.
- Note that you cannot complete these steps until your new program has officially launched.

3. Meet all admission requirements for your new degree program, as outlined in that program's student handbook.
    - You can only officially indicate your intent to pursue a particular degree on that program's enrollment form. (E.g., you can only indicate your intent to pursue the MS-DS degree via the MS-DS enrollment form.)

4. Wait until admission decisions are released. Decisions are released once per session, approximately 3-4 weeks after the end of the session.

Academic Records & Policies for For-Credit Courses

Course Repetition & Replacement

Course Repetition

The cumulative GPA and credit totals are based on all courses attempted. Students may repeat as many different courses as they like, but they can only repeat the same for-credit MS-DS course once regardless of the grade they earn. Course attempts that result in a "W" (withdrawal) are not counted toward the two attempts.

Grade Replacement

The Grade Replacement Policy allows students in eligible courses with qualifying grades, to repeat courses and replace credits in the cumulative GPA calculation. In this process, all courses attempted will still appear on the transcript.

To be eligible for grade replacement, you must:

- Have previously taken an eligible MS-DS on Coursera course for credit and earned a C+ or lower.

- Have no record of academic dishonesty for the course in question.

- Still be working toward graduation. Graduates are not eligible for grade replacement for courses taken prior to earning their degree.

- Note that grades for DTSA 5900 may be eligible for grade replacement only if you retake the course under an updated (permanent) catalog number and contact reg-specialprograms@colorado.edu to request that the Office of the Registrar and the Data Science program review your eligibility.

- See the Grade Replacement Policy for more details.

Course Drops, Tuition Refunds, Withdrawals & Grades

Because the MS-DS has flexible course start dates, all drops, tuition refunds, withdrawals and grades are handled at the individual course level. It is the student's responsibility to monitor these deadlines. Coursera and CU Boulder are not responsible for notifying the students of these deadlines. To drop or withdraw from a course students must complete the appropriate form on the CU Boulder Registrar's Special Programs page.

Course Drop & Refund

To drop a class and receive a full refund, two requirements must be met:

1. The student must submit a drop request within 14 days of the class start date or their enrollment date, whichever is later; and
2. The student must not have accessed restricted content (e.g., password quiz, honor code verification, final assessment such as final exam/project, etc.) in the course or received a course grade.

When a course is dropped under these conditions, it will not appear on the student's record. All refunds are returned to the payment method on file within 10 business days.

The following examples help to illustrate the timeline for students to drop and receive a refund:

- o *Enrolled Before Class Start*: A student enrolls in a class before it begins. Class starts on the 1st of the month. The deadline for the student to drop this class and receive a refund is 11:59 pm MT on the 14th of that same month.
- o *Enrolled After Class Start*: A student enrolls in a class after it begins. Class starts on the 1st of the month, but the student enrolls on the 10th of the month. The deadline for this student to drop the class and receive a refund is 11:59 pm MT on the 23rd of that same month.

If a student enrolls in a course and does not complete the course, tuition payments cannot be rolled over to future sessions.

Course Withdrawal

Students who request to drop the course after the 14-day period and who have not accessed the restricted content (e.g., password quiz, honor code verification, final assessment such as final exam/project, etc.) may withdraw from the course until the session end date, prior to 17:00 hours (5:00 pm Colorado Mountain Time). When a student withdraws from a course under these conditions, they are not eligible for a refund and will receive a grade of W on their academic record. W grades have no bearing on GPA and credit total.

Neither Coursera, nor the University of Colorado, nor the Data Science program at CU Boulder is responsible for students who delay too long and experience technical or other difficulties; it is the student's responsibility to act responsibly and promptly when making these kinds of decisions.

As noted under Tuition, if a tuition payment does not process successfully, a financial hold is placed on the student's account and the student will be prevented from registering for future courses at CU Boulder until the outstanding amount is paid in full.

See Program Withdrawal for more information about withdrawing from the MS-DS program.

Grades

Students who access restricted content (e.g., password quiz, honor code verification, final assessment such as final exam/project, etc.) are ineligible for a drop, withdrawal or refund, and are assigned a final grade.

Upon completion of all required coursework and within a couple of weeks following the session end date, a letter grade is recorded on the student's CU Boulder transcript.

Students who complete some but not all coursework and who specifically do not complete the password quiz to unlock the final exam (or equivalent, like an honor code verification) will be assigned administrative Ws after the session end date passes.

Grades of Incomplete (I) are not assigned as part of the program, and a Pass-Fail (P/F) grading basis is not offered.

Academic Standing, Time Limit, Discontinuance & Withdrawal

Academic Standing

Degree-seeking students admitted to the MS-DS are expected to maintain a cumulative GPA of 3.00 or higher for good academic standing in the program and to earn the degree.

If a student's cumulative GPA falls below 3.00, the student is considered in **academic recovery**. The student will remain in academic recovery until the cumulative GPA is raised to 3.00, at which point the student is returned to good academic standing.

If a student's cumulative GPA falls below 2.50, they will be **academically dismissed** from the degree program. Such students may continue to take for-credit courses as non-degree-seeking and may be able to earn a certificate but cannot earn a degree. To be reinstated to the degree program after dismissal, the student must raise their cumulative GPA to 3.00 and complete the other requirements for admission, including the successful completion of a new pathway specialization.

The MS-DS degree cannot be awarded until the minimum 3.00 cumulative GPA has been achieved.

Time Limit

Courses used toward the degree must have been completed within 8 years of the degree conferral date. Courses taken more than 8 years prior to graduation will appear on the transcript and be calculated in the cumulative GPA but may not be used toward the degree. Students may continue to pursue the degree even after eight years, but they must accrue 30 credits within an 8-year window in order to earn the degree.

The 8-year restriction is applied to courses on a rolling basis and is determined by the date that credit was awarded in the course.

Discontinuance

Students admitted to the MS-DS degree program are not otherwise required to take a minimum number of credit hours over any given period of time and are not required to apply for a leave of absence when not enrolled in courses. However, students admitted to the degree program who have not enrolled for two years will be discontinued until they enroll in a new for-credit course. At that point, the student will automatically be reinstated.

Program Withdrawal

Students admitted to the MS-DS on Coursera program may formally withdraw from the program by contacting the academic program advisor who will, in turn, notify the Office of the Registrar to discontinue the student.

Non-degree seeking students (not admitted to the degree program) may simply stop enrolling in future courses. No withdrawal formalities of any sort are necessary.

See Course Withdrawal for more information about withdrawing from individual courses.

Privacy Policy

This program adheres to the University of Colorado Boulder's commitment to the protection of individual privacy. See the CU Boulder Privacy Statement for details.

In order to preserve the integrity of this program, some exams and projects will have live proctoring managed by ProctorU. Read the ProctorU Privacy Policy for details.

Program Faculty, Course Facilitators, Degree Governance & Student Support

Program Faculty

All courses and specializations affiliated with the MS-DS are designed and taught by instructors with Graduate School faculty status.

Course Facilitators

Course facilitators—typically graduate students knowledgeable in the subject matter—will assist in administering courses. Course facilitators participate in the course discussion forums, respond to student feedback, address issues with the course and its

features on the platform, and convey any relevant issues to the instructor of record and relevant program administrators.

Degree Program Governance

The MS-DS on Coursera is overseen by a dedicated MS-DS faculty director, who works with associated department chairs, staff, Graduate School, program coordinator and course coordinator. The faculty director is charged with the day-to-day operations of the degree program, including budgetary oversight, chairing the MS-DS steering committee, as well as working with the College of Arts and Sciences; College of Engineering and Applied Science; College of Media, Communication, and Information; and the Graduate School and the Provost's Office.

The MS-DS is governed by the MS-DS steering committee. The MS-DS steering committee is charged with overseeing the strategic direction of the degree, as well as reviewing its program-specific processes and policies annually.

Student Services Provided to Enrollees in the Program

Academic Support

A student's primary academic support will be via peer mentorship and course facilitators.

Graduate Advising for the Program

Students may contact the MS-DS graduate advisor at msds-support@colorado.edu.

Career Services & Alumni Association

Students who are admitted into the degree will receive lifelong access to Handshake and other selected services and resources via CU Boulder Career Services and the Forever Buffs alumni network.

Diplomas

Degrees are conferred three times annually. Check the graduation calendar for semester-specific dates. Diplomas are issued to graduating students in both paper and digital formats. See Order a Diploma or Certificate.

Certificates

Certificates are automatically awarded and transcribed on the student's transcripts after the certificate requirements are met. Certificates are issued in both paper and digital formats. See Order a Diploma or Certificate.

Commencement

Students who graduate from the program and earn the MS-DS degree are welcome to attend on-campus graduation ceremonies but are not obligated to do so.

Academic Dishonesty & Honor Code

The University of Colorado Boulder takes issues of academic dishonesty extremely seriously.

Students in all of CU Boulder's courses, whether not-for-credit or for-credit, are expected to perform to the highest standards of academic honesty.

Students enrolled in for-credit courses are members of the CU Boulder community and are subject to the Honor Code Office's policies and procedures.

Additionally, due to its online nature, the MS-DS on Coursera program must specify some additional honor code regulations. The MS-DS on Coursera program utilizes peer reviewed assignments in some of its courses. The nature of these assignments means that project rubrics become available to students after submission.

- Students are NOT allowed to copy or use in any way the material and information that is provided on the grading rubrics.
- Students are also NOT allowed to copy material that other learners have submitted in their assignments.
- Students are NOT allowed to copy material from outside sources (websites, books, etc.)

All examples listed above are considered plagiarism and will be subject to grade repercussions varying from a 0% grade on the assignment to a 0% grade in the class.

Any suspected violations of the Honor Code, including reports of violation from the MS-DS's proctoring service, will be submitted to the CU Boulder Honor Code Office (honor@colorado.edu).

Students who violate the Honor Code are subject to discipline, including possible academic penalties and non-academic sanctions. The course instructor will assign relevant academic sanctions for students found to have violated University rules on Academic Dishonesty, if applicable.

Find more details on the Honor Code at the Honor Code Office website and in the B3 Program Policies.

Petition, Appeal & Grievance Issues

Petitions, appeals, connectivity issues and grievances should be handled at the lowest level possible, within the individual course if appropriate. This policy applies to platform issues as well as discussion forum, course content, assessment and degree issues.

Concerns regarding platform issues should be directed to Coursera's technical support team at msds-support@colorado.edu.

Learning management system issues (i.e., CU Boulder software as distinct from Coursera software) should be directed to the CU Boulder Office of Information Technology (oithelp@colorado.edu). This includes issues with Canvas LMS, the platform where all CU Boulder students must complete a non-credit Mandatory Community Equity Training course after program admission. See the Current Students page for course details.

Concerns regarding discussion forum, content, assessment, and degree issues should be brought directly to the individual course's course facilitator. If the course facilitator cannot resolve the issue, he or she will escalate the issue through the following resolution hierarchy:

1. Course Facilitator
2. Course Coordinator
3. Program Manager
4. Instructor of Record
5. Faculty Director
6. Department chair and Dean of Appropriate School if applicable, or Graduate School dean as determined by the Faculty Director.

Concerns regarding the degree itself, and not having to do with a particular course, follow a different pathway. These should begin with the Graduate Advisor and then move accordingly:

1. Graduate Advisor
2. Program Manager
3. Faculty Director
4. Graduate School Dean

In all cases, the program policy is to resolve student concerns at the lowest level possible, without escalation.

Connectivity Issues

Students are responsible for ensuring that they have a stable exam environment when taking proctored assessments. Coursera and CU Boulder are not responsible for internet connectivity issues.

Grade Appeals

The instructor of record has primary authority and responsibility in all aspects of evaluating student course performance and assigning grades.

If a student believes that a course grade is incorrect, the student should first contact the course facilitator or instructor of record. Failing resolution at this level, the student may make a formal, written grade appeal to the program faculty director.

The written grade appeal must document the basis for the appeal and should state the specific remedy desired by the student. The appeal should include the following:

1. The student's name
2. The course, section, and date
3. The details of the case, including the steps taken to resolve and, if a specific test or homework is concerned, the nature of the problem
4. The student's desired outcome

The appeal must be submitted within 30 days of the conclusion of the course to msds-support@colorado.edu. The instructor of record will be given an opportunity to respond in writing to the faculty director regarding the student's appeal.

If the faculty director finds that the grade has been improperly or unprofessionally assigned, they will recommend within 30 days that either (1) the original grade stands, or (2) that a revised grade be assigned. The faculty director will submit a short written statement summarizing the reasons for its recommendation and submit an official change of grade request.

In cases where the instructor or student do not agree with the committee recommendation, the faculty director shall submit all materials to the Dean of the college where the course is rostered (or a designee), who will make a final decision on the student's grade appeal. In the case of an interdisciplinary course not rostered within a home department or college, materials shall be submitted to the Dean of the Graduate School. There is no further appeal.

Grievances

Programs follow the Graduate School policy for grievances. The first step in the Grievance Process and Procedure requires a student to first file a grievance through the program, and then file an appeal to the Graduate School if the issue is not resolved through the program-level process. The program-level grievance shall be initiated by submitting the Graduate Student Grievance form to the faculty director. The grievance must be reviewed by an ad-hoc faculty committee or steering committee before an appeal can be filed directly to the Graduate School. Additionally, the University of Colorado Boulder has a guide for information related to appeals, complaints, and grievances, including those for distance and online students.

Students located outside of Colorado must first seek resolution with the University of Colorado Boulder by filing a complaint with the appropriate person or office. If the student bringing the complaint is not satisfied with the outcome of the university's internal processes, the student may file a complaint with the university's SARA Portal Entity at the Colorado Department of Higher Education.

The University of Colorado Boulder also provides access to a list of all state contacts for filing complaints should the person wish to pursue these venues.

Regardless of location, if students are unsatisfied with the resolution and all other avenues provided have been exhausted, unresolved complaints may be filed with the Higher Learning Commission, the University's regional accreditor.

> Higher Learning Commission
> 230 South LaSalle Street, Suite 7-500
> Chicago, IL 60604
> Telephone: 800-621-7440
> info@hlcommission.org
> http://www.hlcommission.org

Accommodations for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see Temporary Medical Conditions on the Disability Services website.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits sexual misconduct (including sexual harassment, exploitation, and assault), intimate partner violence (including dating or domestic violence), stalking, protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information and other resources can be found on the OIEC website.

Please know that CU Boulder faculty, instructors and staff have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about reporting options and support resources. This applies regardless of where or when an incident occurs if it involves a member of the CU Boulder community. One of the free, confidential resources to help someone explore their options and receive trauma-informed counseling is CU's Office of Victim Assistance (OVA), 303-492-8855.

To learn more about reporting and support options for a variety of concerns, visit Don't Ignore It.

State Authorization Reciprocity Agreements (SARA) & the Higher Education Opportunity Act

State Authorization

The University of Colorado is part of, and participates in, the State Authorization Reciprocity Agreement (SARA) – an agreement among states, territories, and the District of Columbia that establishes a level of quality in distance education and offers consumer protection to students. As a participant in SARA, the University of Colorado Boulder agrees to comply with applicable state and federal regulations in order to offer educational opportunities outside of Colorado.

International Students: International Students are advised to understand and be apprised of the norms, rules, regulations, and requirements related to online distance education programs in their country of residence, particularly if the country will charge

any additional taxes, withholdings, or fees associated with online distance education programs.

International students are encouraged to contact the International Student and Scholar Services in the Office of International Education if they have any questions.

Higher Education Opportunity Act

The Higher Education Opportunity Act requires institutions of higher education to disclose and make available to current and prospective students safety-related, financial, graduation rate, athletics, and cost information, as well as instructions on how to obtain more information.

Students may review these required disclosures for CU Boulder at the Student Right To Know website.

Accreditation & Designations

The University of Colorado Boulder is accredited by the Higher Learning Commission (HLC).

The University's accreditation may include programs delivered via correspondence or distance education upon notification to HLC.

See the B3 Program Policies for HLC and Department of Education definitions of *correspondence education*, *correspondence courses* and *distance education*.

Please note: programs offered by the University of Colorado Boulder that are designated as correspondence education are not eligible for Financial Aid.

Additional Policies for CU Boulder B3 Special Programs

See B3 Program Policies for details about additional policies that apply to this program.