Master of Science in Data Science (MSDS)

Student Handbook 2025

Data Science Institute (DSI), University of Chicago

2025-09-03

Table of contents

1 Master of Science in Data Science (MSDS)

Student Handbook 2025

1.1 University of Chicago Student Handbook

The University of Chicago also has a UChicago Student Handbook for students across all programs, degrees, and disciplines.

1.2 About the Program

The Master's in Data Science (MSDS) program at the University of Chicago provides rigorous training in theoretical foundations, computational techniques, and research methodologies to prepare students for impactful careers and further study.

Learn More About DSI →

Part I

Program Overview

2 Introduction

2.1 Welcome Message from the Director

Dear Students,

Welcome to the Master of Science in Data Science (MSDS) program at the University of Chicago.

This is a program designed to push boundaries—both in thought and in practice. Our curriculum is grounded in rigorous analytical training, principled computational approaches, and a deep respect for the power of data to shape our world responsibly.

As Director, I'm excited to support your growth not only as data scientists, but as thinkers, collaborators, and future leaders in a rapidly evolving field. You'll find here a vibrant academic community, dedicated faculty, and an ecosystem that spans disciplines—from computational sciences and information theory to the social sciences and humanities.

This handbook will guide you through your academic journey. I encourage you to explore it—and make the most of the opportunities ahead.

We're glad you're here. Now let's get to work.

Warm regards,
Edwin Lo
Director, MSDS Program
Data Science Institute
University of Chicago

2.2 About the Data Science Institute

The **Data Science Institute (DSI)** at the University of Chicago embodies the university's bold and innovative vision of data science as a distinct and transformative discipline.

Serving as an intellectual hub, DSI advances these three foundational goals:

- **Interdisciplinary Research** — Provide world-class research focused on big data and AI to tackle the most challenging societal and scientific problems.

- **Outreach and Partnerships** — Foster outreach with partnerships across industry, government, academia, and social impact organizations to effect sustainable and scalable change.

- **Data Science Education** — Lead a comprehensive educational mission through the Committee on Data Science (CODAS), which grants degrees in BA, BS, MS and PhD in our undergraduate, MSDS, MSADS, and PhD programs.

Visit the DSI Website

2.3 Mission and Objectives of the MSDS Program

The **Master of Science in Data Science (MSDS)** program is designed for students aiming to pursue PhD or research careers in data science and related fields.
The curriculum combines rigorous theoretical foundations with practical applications, offering courses taught by faculty from the Departments of Statistics, Computer Science, and other disciplines across the university.
More about the MSDS Program

Key objectives of the MSDS program include:

- **Interdisciplinary Integration**:
  Equipping students with the ability to apply data science techniques across various fields, fostering collaboration and innovation.
- **Research Excellence**:
  Providing a strong foundation in data science methodologies to prepare students for advanced research and doctoral studies.
- **Ethical Responsibility**:
  Emphasizing the responsible use of data and algorithms, ensuring that graduates are mindful of the societal impacts of their work.
- **Practical Experience**:
  Offering hands-on projects and research opportunities that allow students to apply their knowledge to real-world problems.

Through this comprehensive approach, the MSDS program aims to develop data scientists who are not only technically proficient but also socially conscious and prepared to lead in the evolving landscape of data science.

3 Academic Calendar and Important Dates

The MSDS program follows the University of Chicago's quarter system. Students typically enroll in the Autumn, Winter, and Spring quarters, with some optional offerings in the Summer quarter.

3.1 Quarterly Schedule

Students are expected to enroll in three courses per quarter to maintain full-time status. If you are enrolling LESS than OR MORE than three courses (300 units), please contact the program administrator or the program director immediately. International students are required to maintain full-time status (see Office of International Affairs OIA for details) with some exceptions.

Important dates for each quarter, such as the start and end of classes, holidays, and exam periods, should be followed per the University's academic calendar for the most up-to-date and official information.

3.2 Key Deadlines

Students should adhere to the following important deadlines throughout the academic year:

- **Registration Deadlines**: Follow these dates set by the university by which students must complete course registration or submit changes. Registration timeline and procedures can also be found here.
- **Course Add/Drop Period**: Time frame in which students may adjust their course enrollments without penalty. Typically, after the first week of class in any quarter, students will need instructors' approval and submit the request to our program administrator to add/change a course registration.
- **Research Proposal Submission**: You should submit your research proposals to the director for approval as soon it is conceptualized. This will ensure the scope and direction of the research is acceptable before you spend time on it. In any case, the proposal should be submitted before the start of the quarter in which you plan to graduate.

- **Graduation Application**: Deadline for applying to graduate, generally is the first full week of the quarter you plan to graduate. The official guidelines can be found on Physcial Science Division PSD weblink here.

4 Program Structure & Degree Requirements

The MSDS program at the University of Chicago is a rigorous, research-oriented program that combines foundational theory with practical applications. Students are required to complete a set of coursework and meet specific academic standards, and to complete a research requirement to earn the degree.

4.1 Program Duration

The program is typically completed in one to two academic years (three quarters: Autumn, Winter, and Spring). The first year is required to be full-time.

4.2 Curriculum Overview

Students must complete a total of **9 core and elective courses**, plus **3 foundational courses** as follows:

- **Foundational Courses (3 courses)**: These cover essential concepts and practices in (1) programming, (2) mathematics, and (3) statistical knowledge that is central to data science and provide the groundwork for advanced coursework. Students can qualify or be placed out of these courses. If needed to take these (online, free) courses, they should be completed in the summer before they begin with the MSDS program in the Autumn, or during the beginning of the Autumn quarter if the course is not offered in the summer.

- **Core Courses (5 courses)**: These delve into key data science techniques, methodologies, and tools.
  - DATA 30100 Introduction to Data Science
  - DATA 31500 Data Interaction
  - DATA 34100 Introduction to Data Systems and Data Design **OR**
    DATA 34200 Data Engineering & Scalable Computing
  - DATA 35900 Responsible Use of Data and Algorithms
  - DATA 37000 Introduction to ML and Neural Networks **OR**
    DATA 37711 Foundations of Machine Learning and AI - Part I

- **Elective Courses (4 courses)**: Students choose from a wide array of electives to tailor their learning to specific interests or career goals. Most graduate level courses (300xx) in the DATA, STAT, and CMSC programs taken with a letter grade (not pass/fail nor audit) are eligible as electives. Reading/Research courses do not count. Graduate courses from other departments/programs that are related to data science could be counted as well. Contact the director for approval with such course elections.
  - There is a special PSD policy exception regarding taking Booth School of Business's courses during your last quarter before graduation: "PSD graduate students may not register for a Booth course in their expected graduation quarter if they need to receive a grade in the Booth course to complete their degree requirements."

More information about the core and elective courses can be found in this spreadsheet.

4.3 Course Selection Guidelines

Students are encouraged to:

- Balance theoretical and applied courses.
- Consider prerequisites when selecting electives.
- Seek guidance from research mentors or academic advisors on sequencing and relevance to career objectives.

4.4 Degree Completion Requirements

To graduate, students must:

- Successfully complete all 9 required courses (core plus electives), with each course receiving a 'C' or better grade.
- Maintain a minimum cumulative **GPA of 3.3** for the **nine core plus elective courses**.
- Fulfill the **research project requirement**. (See Research Project Requirement)

4.5 Enrollment Status

- **Full-Time Status**: Students must enroll in at least **3 courses per quarter**.
- **Part-Time Option**: In some uncommon situations, after completing one full year of the MSDS program, students may petition to enroll part-time to complete their MSDS requirements in their second year.
- **Minimum Enrollment**: At least one course per quarter is required to maintain active enrollment, unless a formal leave of absence is granted.

5 Course Descriptions

This section provides an overview of the three main categories of courses in the MSDS program: Foundational, Core, and Elective. Full course descriptions, prerequisites, and schedules can be found on the Course Catalog or the DSI program website. To register for courses, please follow Physical Sciences Division (PSD) guidelines here.

5.1 Foundational Courses

Foundational courses are designed to equip students with essential concepts and technical skills necessary for success in advanced coursework. Each one is a five-week online course, offered in the late summer before the Autumn quarter starts. The three foundational courses are:

- **Computational Foundations** - Python for Data Science: This course in Python starts with an introduction to the Python programming language basic syntax and environment.

- **Mathematical Foundations** - Advanced Linear Algebra for Machine Learning: This course is focused on the theoretical concepts and real-life applications of linear algebra for machine learning.

- **Statistical Foundations** - Introduction to Statistical Concepts: This course provides general exposure to basic statistical concepts that are necessary for students to understand the content presented in more advanced courses in the program.

5.2 Core Courses

Core courses deepen students' understanding of key data science methodologies and provide hands-on experience with data systems, algorithms, and models. Sample topics include:

- **DATA 30100 Introduction to Data Science** - The course will focus on the analysis of real-life data and on statistical and machine learning methods to perform inference and to predict future outcomes. It will cover topics from the whole data life cycle, ranging from data collection (including wrangling, cleaning, and sampling) to summarizing results through visualization and interpretable summaries, with a focus

on extracting meaning, value and information from data. Important aspects in data science, such as bias, fairness, privacy while building algorithms and predictive models, will also be explored.

- **DATA 31500 Data Interaction** - This course provides core knowledge and technical skills around data interfaces, with an emphasis on visualization and front-end software development. Graduate students in Data Science and Computer Science will engage in project-based learning to become fluent with visualization APIs, computational notebooks, web development, technical writing, and presentation. Topics of interest include data visualization design, spatial and visual reasoning, cartography, interactive articles, data storytelling, data-driven persuasion, uncertainty communication, and model interpretability.

- **DATA 34100 Introduction to Data Systems and Data Design** - The goal of this course is to teach students: (1) how to think about data , its logical semantics, and what is a query; (2) how to practically handle data, both in relational databases and other more flexible data processing frameworks (e.g. Spark); (3) practical design principles about schema, integrity constraints, etc. (4) an introduction to systems that allows students to understand performance, and helps them become better users.

- **DATA 35900 Responsible Use of Data and Algorithms** - The goal of this course is to cultivate a societally oriented mindset and to train students critically about the contexts into which data science is deployed. It will be organized around a series of modules consisting of three components: (i) a broad challenge, (ii) mathematical / technical approaches that have been used to address that challenge, and (iii) a real-world case study. The modules will cover a diverse set of topics, including for example: disclosure avoidance (i.e. privacy as in differential privacy); algorithmic fairness; decision making in dynamic and strategic settings; biases in machine learning (e.g. word embeddings or facial recognition); data-driven policymaking; explainable and interpretable AI; and robustness to adversarial behavior.

- **DATA 37000 Intro to ML and Neural Networks** - This course is an introduction to machine learning (ML) for students to build a solid foundation in modeling and data science. It will cover both unsupervised and supervised ML algorithms, with the latter focusing on both regression and classification models. Python is the programming language of choice for implementing various models to solve complex problems across multiple domains. The course will also introduce basic neural network architectures, including Single-Layer Perceptron (SLP), Convolutional Neural Networks (CNN), and Recurrent Neural Networks (RNN). Students will apply these techniques in contexts where they are most effective. A strong understanding of linear algebra, multivariable calculus, and statistics/probability theory is expected. Python coding assignments and projects will be integral to the course.

- **DATA 37711 Foundations of Machine Learning and AI - Part I** - This course is an introduction to machine learning targeted at students who want a deep understanding of the subject. Topics include modern approaches to supervised learning, unsupervised learning, and the use of machine learning in estimating real-world effects. In principle, no previous exposure to machine learning is required. However, students are expected to have mathematical maturity at the level of an advanced undergraduate, including being comfortable with linear algebra, multivariate calculus, and (non-measure theoretic) statistics and probability. Assignments include programming in python (and pytorch).

5.3 Elective Courses

Elective courses allow students to explore specialized domains and applications of data science. These may be selected from offerings within the Data Science Institute or other departments (e.g., Computer Science, Statistics, Public Policy). Example DATA electives are listed below. A list of other courses offered by other departments/programs can be also found in this spreadsheet. Contact the program director for other data-related courses that might be eligible. Students should consult with their advisors when selecting electives to ensure they align with career goals and satisfy degree requirements.

- **DATA 30120 Technical Presentation** - This course is intended for PhD students in CS and Data Science. This seminar will focus on giving technical presentations, emphasizing presenting results at a conference or workshop. We will cover topics such as structuring and designing talks, audience identification, setting context, introductions, body language, pacing, slideshow visualizations, explaining experiments and results, conclusions, and other general tips. Students will be expected to give short snippets of talks and provide active feedback on others.

- **DATA 30332 Thinking with Deep Learning for Complex Social & Cultural Data Analysis** - A deluge of digital content is generated daily by web-based platforms and sensors that capture digital traces of human communication and connection, and complex states of society, culture, economy, and the world. Emerging deep learning methods enable the integration of these complex data into unified social and cultural "spaces" that enable new answers to classic social and cultural questions, and also pose novel questions. From the perspective of deep learning, everything can be viewed as data-novels, field notes, photographs, lists of transactions, networks of interaction, theories, epistemic styles-and our treatment examines how to configure deep learning architectures and multi-modal data pipelines to improve the capacity of representations, the accuracy of complex predictions, and the relevance of insights to substantial social and cultural questions. This class is for anyone wishing to analyse textual, network, image or arbitrary structured and unstructured data, especially in concert with one another to solve complex social and cultural analysis problems (e.g., characterize a

culture; predict next year's ideology).

- **DATA 33221 Advanced Topics in Law and Computing** - This interdisciplinary seminar will bring together instructors and graduate students from Computer Science / Data Sciences and the Law School. The seminar's focus will be on topics where law and policy intersect with computer science. Such topics may include cryptography and encryption; electronic surveillance and criminal procedure; the Computer Fraud & Abuse Act; the law governing data breaches; redistricting and the US Census; deep fakes; GDRP, Europe's Digital Services Act and the CCPA; and international data transfers. Students will be evaluated on the basis of short bi-weekly reaction papers, class participation based on weekly assigned reading, and team projects that pair law students with computer and data scientists.

- **DATA 34200 Data Engineering and Scalable Computing** - This course covers the principles and practices of managing and processing data at scale. Students will learn about distributed systems, cloud computing, and big data technologies. Topics include data storage architectures, data catalogs and governance, distributed computing frameworks like Apache Spark, streaming data processing, and data transformation pipelines. The course will provide hands-on experience with state-of-the-art tools and techniques for building end-to-end data engineering solutions to support large-scale data science, analytics and AI applications.

- **DATA 35422 Machine Learning for Computer Systems** - This course will cover topics at the intersection of machine learning and systems, with a focus on applications of machine learning to computer systems. Topics covered will include applications of machine learning models to security, performance analysis, and prediction problems in systems; data preparation, feature selection, and feature extraction; design, development, and evaluation of machine learning models and pipelines; fairness, interpretability, and explainability of machine learning models; and testing and debugging of machine learning models. The topic of machine learning for computer systems is broad. Given the expertise of the instructor, many of the examples this term will focus on applications to computer networking. Yet, many of these principles apply broadly, across computer systems. You can and should think of this course as a practical hands-on introduction to machine learning models and concepts that will allow you to apply these models in practice. We'll focus on examples from networking, but you will walk away from the course with a good understanding of how to apply machine learning models to real-world datasets, how to use machine learning to help computer systems operate better, and the practical challenges with deploying machine learning models in practice.

- **DATA 37100 Introduction to AI: Deep Learning and GAI** - Artificial Intelligence is transforming industries and daily life, permeating almost every aspect of modern society. This course builds on technical knowledge from previous foundations in Machine Learning and Neural Networks to provide a deep understanding of current AI

platforms. Emphasizing hands-on experience in Generative Artificial Intelligence, students will learn to implement and train advanced AI models, including but not limited to transformers, diffusion models, and Large Language Models (LLMs). Additionally, the course will critically examine the ethical implications of AI, exploring the benefits, challenges, and potential risks associated with its deployment. Students enrolling in this course should have proficiency in Python programming, and a solid foundation in mathematics (including linear algebra and multivariable calculus) as well as statistics.

- **DATA 37200 Learning, Decisions, and Limits** - This is a graduate course on theory of machine learning. While ML theory has multiple branches in general, this course is designed to cover basics of online learning, along with basics of reinforcement learning. It aims to establish the foundation for students who are interested in conducting research related to online decision making, learning, and optimization. The course will introduce formal formulations for fundamental problems/models in this space, describe basic algorithmic ideas for solving these models, rigorously discuss performances of these algorithms as well as these problems' fundamental limits (e.g., minmax/lower bounds). En route, we will develop necessary toolkits for algorithm development and lower bound proofs.

- **DATA 37400 Nonparametric Inference** - Nonparametric inference is about developing statistical methods and models that make weak assumptions. A typical nonparametric approach estimates a nonlinear function from an infinite dimensional space rather than a linear model from a finite dimensional space. This course gives an introduction to nonparametric inference, with a focus on density estimation, regression, confidence sets, orthogonal functions, random processes, and kernels. The course treats nonparametric methodology and its use, together with theory that explains the statistical properties of the methods.

- **DATA 37712 Foundations of Machine Learning and AI - Part 2** - Deep generative models have become a staple of modern machine learning research. This course is meant as an introduction to the way generative models are structured and trained: students will learn the mechanics of generative models as well as getting their hands dirty building them. We will discuss open questions for which we lack complete theoretical or empirical answers, with importance placed on analyzing, interpreting, and making arguments from necessarily incomplete empirical evidence. We will have a specific focus on Autoregressive Transformers and their use as Large Language Models (LLMs) but will also touch on Diffusion Models as well as Reinforcement Learning. The goal of this course is to get students to be proficient enough with the inner workings of deep generative models—along with the theoretical and empirical support for their design—to be able to understand and reason about cutting-edge research. This is an advanced machine learning course and assumes a familiarity with basic machine learning concepts (generalization, overfitting, etc.) and techniques (regularization, stochastic gradient descent, etc.).

- **DATA 37784 Representation Learning in Machine Learning** - This course is a seminar on representation learning in machine learning. The core questions in this are: how do machine learning systems recover the structure present in real-world data, how can we expose this recovered structure to human analysts, and how does this help us in real-world applications? In this seminar, we will read and discuss papers from the modern research literature on these subjects. Students should have previous exposure to machine learning and deep learning.

- **DATA 41551 Empirical Bayes** - In an empirical Bayes analysis, we imitate inferences made by an oracle Bayesian with extensive knowledge of the data-generating distribution. Empirical Bayes provides a principled approach for "learning from the experience of others" and is widely used in application domains such as genomics, small-area estimation, economics, and large-scale experimentation. In this graduate topics course, we provide an overview of empirical Bayes. We revisit the original papers that introduced the core ideas and explain how empirical Bayes is applied in practice. We also develop mathematical techniques to study empirical Bayes procedures from a theoretical perspective.

6 Research Project Requirement

6.1 Overview

All students enrolled in the Master of Science in Data Science (MSDS) program at the University of Chicago's Data Science Institute (DSI) are required to complete a rigorous research project. This project serves as a capstone experience, demonstrating mastery of data science techniques, the ability to conduct independent research, and effectively communicate results.

6.2 Project Requirements

6.2.1 Collaboration

- Students are encouraged to seek mentorship from faculty members or postdoctoral fellows within DSI. Projects can also involve faculty or researchers from other departments or institutions; however, such projects must include a DSI faculty supervisor or the MSDS Director to ensure proper guidance and oversight.
- In such projects with a faculty mentorship, it is possible that more than one MSDS student could be involved in the same project.
- Students who wish to conduct their own research can only do so with the approval of the MSDS Director. Such projects should not involve more than one MSDS student. There should be bi-weekly updates with the MSDS Director on the research progress.

6.2.2 Project Approval

- All projects must receive formal approval from the MSDS Director to be eligible as fulfilling the MSDS program requirement.
- Students are encouraged to seek approval from the MSDS Director prior to initiation. This is absolutely necessary for students directing their own research. For students working with a faculty mentor, a formal proposal can be submitted at a later stage (but in any case, no later than the deadline of applying for graduation). Keep the MSDS Director informed of your current research collaborations even before the formal proposal submission.

- For formal project approvals, students should submit a brief research proposal (1-2 pages) outlining their project's objective, methodology, data sources, expected outcomes, timeline, and supervising faculty member info (if applicable).

6.3 Completion Options

Students must fulfill at least one of the following requirements to successfully complete their research project:

6.3.1 Presentation to DSI Faculty Panel

- Deliver a 15-20 minute oral presentation followed by Q&A before a panel consisting of at least three DSI faculty members.
- The presentation should clearly outline the project's motivation, methodology, analysis, findings, and implications.
- The presentation should be scheduled **during the final exam week**, or earlier, of the quarter of intended program completion.

6.3.2 Research Paper Submission

- Submit a comprehensive research paper.
- The paper should adhere to professional publication standards, clearly documenting the research problem, literature review, methods, data analysis, results, discussion, conclusions, and references.
- The paper is **due on the Friday before** the final exam week of the quarter of intended program completion.

6.3.3 Peer-Reviewed Journal Publication

- Demonstrate acceptance or in some cases, submission of research findings in a recognized peer-reviewed academic journal or conference proceeding relevant to data science. A statement of contribution and/or a faculty endorsement is also required.
- Documentation of submission or acceptance must be provided to the MSDS Director.
- The strength of the publication and the contribution from the student will be evaluated thoroughly to determine level of competency.

6.4 Evaluation Criteria

Projects will be evaluated based on:

- Originality and innovation
- Rigorous application of data science methods
- Clarity of written and/or oral communication
- Depth of analysis and discussion
- Impact and practical significance

6.5 Responsibilities

- **Students**: Manage project timelines, proactively engage with faculty mentors, and ensure adherence to guidelines.
- **Faculty Supervisors**: Provide consistent oversight, mentorship, and evaluation of the project.
- **MSDS Director**: Ensure program standards are maintained, provide final approval, and address any project-related issues.

Part II

Policies and Conduct

7 Academic Policies

The MSDS program follows the academic policies set by the University's standard. Additional provisions relevant to our program's structure and expectations are listed here.

7.1 Registration and Course Enrollment

Students are required to register for courses through the university's my.UChicago portal each quarter. Changes to registration must be made during the official add/drop period. Some general notes regarding class registrations and add/drops:

- **Pass/Fail** Classes not earning letter grades do not fulfill the MSDS course requirements.
- **Withdrawal/Refund** Univerisity policy allows students to withdraw from a class at any time up until final exam date, or final project due date.
  - Up to the end of the third week of class, a withdrawal will remove the registration information from the transcript. Tuition will be refunded 100%
  - After the third week, a 'W' grade will remain on the transcript, tuition is not refunded, and there will be a late change registration fee.
  - A withdrawal might affect the full-time status, which could be crucial for international students.
- **Add/drop** After the first full-week of class, all add/drops typically require the instructor and our administrative approval. This cannot be done via my.UChicago portal.
  - After the third full week of class, there will be a late change registration fee.

7.2 Time to Complete the MSDS Program

Students can take from one to two (consecutive) years to complete all program requirements. When all course requirements have been fulfilled, students may elect to continue part-time

to complete their research requirements. International students should consult with OIA regarding the up-do-date visa restrictions.

7.3 Academic Honesty Code

All students are expected to uphold the highest standards of academic honesty. Plagiarism, cheating, and other forms of academic dishonesty are strictly prohibited and may result in disciplinary action.

Refer to the University's Academic Integrity Policy for detailed guidance.

7.4 GPA, Academic Progression and Probation

Students should maintain their (cumulative) GPA at or above 3.0, and make satisfactory academic progression. The following conditions may cause the student to be placed on Academic Probation:

- Cumulative GPA, all courses, below 3.0
- Cumulative GPA, MSDS core plus elective courses, below 3.3
- Receives one or more letter grades below 'C-' in a quarter
- Receives two or more Withdrawals 'W', Incompletes 'I', or blank grades in a single quarter
- Violate the academic honesty code

Students on probation cannot take more than 300 units of credits in the quarter. A second time the student is placed under probation will be dismissed from the program.

7.5 Student Concerns and Grievances

Should there be any concerns or disputes regarding classes, assignments, gradings, and other matters relating to the education and research in the program, the chain of communications to address should be:

- **Instructor** if it is pertaining to a course.
- **Chair** of the program/department, if applicable.
- **MSDS Director**
- **DSI Director**
- **PSD Dean of Students**

7.6 Leave of Absence and Withdrawal Policies

Students seeking a leave of absence or withdrawal must submit a formal request and consult with the program director. Leaves are granted for medical, personal, or professional reasons.

7.7 Disciplinary Procedures

Violations of academic or behavioral policies are subject to the university's disciplinary procedures. These may include warnings, probation, suspension, or dismissal depending on the severity of the infraction.

8 Code of Conduct

Students in the MSDS program are expected to conduct themselves in a professional, respectful, and ethical manner at all times. The following policies outline behavioral expectations and community standards.

8.1 Professional Conduct and Community Standards

Students are expected to:

- Treat peers, faculty, and staff with respect and civility.
- Engage in constructive discourse and maintain professionalism in both academic and co-curricular settings.
- Demonstrate responsibility and integrity in all academic and research activities.

8.2 Harassment and Discrimination Policy

The University of Chicago is committed to maintaining a learning environment free from discrimination and harassment. Any behavior that violates this commitment may result in disciplinary action.

Refer to the University Policy on Harassment, Discrimination, and Sexual Misconduct for more information.

8.3 Collaboration and Ethical Research Practices

While collaborative learning is encouraged, all students must:

- Clearly distinguish between collaborative and individual work.
- Follow ethical research standards in the collection, analysis, and reporting of data.
- Properly cite all sources and acknowledge contributions.

8.4 Student Responsibility and Accountability

Students are accountable for:

- Understanding and following university and program policies.
- Acting as representatives of the Data Science Institute and University of Chicago community.
- Reporting violations of conduct policies to appropriate authorities when necessary.

9 Scholarships

DSI offers merit-based scholarships to some of our admitted MSDS students. Scholarship award are for one year (3 quarters) with the student enrolling full-time, assuming the student takes three or more courses for each quarter (Autumn, Winter, and Spring). Otherwise, the scholarship could be adjusted or revoked.

9.1 Maintaining a High Standard

Students need to maintain in the previous (one) quarter a 3.0 GPA and all courses earning 'C' grade or above to continue receiving the scholarship award. Students under probation will lose the scholarship until the GPA and course grade requirements have been rectified in the following quarter.

9.2 Beyond the First Year

If a student is continuing to complete the program in their second year, they would be eligible for the same scholarship award, on a per-course/unit basis. The annual amount divided by 9 is the scholarship award per (100-unit) course the student will receive, up to three (100-unit) courses per quarter.

Part III

Resources and Support

10 Advising

The MSDS program is committed to providing comprehensive support to ensure student success throughout the academic journey.

10.1 Academic Advising

The MSDS Director is available to assist with course selection, program requirements, and academic planning questions. Please schedule an appointment via the links and contact info listed on the "Administrative Contacts" section.

10.2 Career Services

There are three main offices offering career service advising to our MSDS students:

- UChicagoGRAD
- PSD Career Service
- DSI MSADS Career Service (online workshops are available to our MSDS students)

They provide a combinations of:

- Resume and cover letter workshops
- Interview preparation sessions
- Networking events with industry professionals
- Internship and job placement assistance

Students are encouraged to take advantage of these Career Service opportunites early on, not just close to graduation. A lot of the skills learned through these take time to develope and improve. The skills are also very helpful with looking for research opportunities and internships, which happens early in the program, long before your graduation.

10.3 Newsletter and Calendar

Subscribe to our newsletters and calendar events to stay on top of our various events.

- DSI events calendar subscription
- DSI events calendar weblink
- Newsletters

11 Computing and Facilities

The MSDS program provides students with access to robust computational infrastructure and learning environments to support coursework, research, and collaboration.

11.1 Computational Resources

The University provides robust technical support:

- Software licenses from IT (Google G Suite, MS Office 365, Box, Zoom, and more)
- IT support services for troubleshooting and assistance

11.2 DSI Computing Clusters

Students will have access to the DSI computing clusters upon matriculation.

Bennett Hunter is our Senior System Administrator at DSI in charge of the cluster.

11.3 Facilities and Lab Spaces

Students are welcome to use designated lab spaces equipped with workstations, whiteboards, and collaboration tools. Reservations may be required for certain facilities.

11.4 Campus Map and Building Locations

DSI spaces are primarily located in the John Crerar Library building and Ryerson Lab second floor. Students can reference the University of Chicago Campus Map to locate classrooms, labs, and computing centers.

12 International Students

The MSDS program welcomes students from around the world and is committed to supporting the unique needs of international scholars during their academic journey.

12.1 Visa and Immigration Information

The University's Office of International Affairs (OIA) provides guidance on:

- Obtaining and maintaining F-1 or J-1 visa status
- SEVIS requirements
- Travel documentation
- Optional Practical Training (OPT) and Curricular Practical Training (CPT) eligibility

Students are responsible for maintaining lawful immigration status throughout their studies.

12.2 Cultural and Campus Resources

UChicago offers resources to help international students adjust to life in Chicago, including:

- Orientation programs and workshops
- Language and writing support
- Student cultural organizations and affinity groups
- International student mixers and networking events

Students are encouraged to engage with the broader UChicago community to enhance their academic and cultural experience.

12.3 Full-Time Course Load and RCL exception

There is a full-time course load requirement for international students on student visas, unless the student applied for a **Reduced-Course-Load (RCL)** exception.

Among the different types of RCL, the **Final Quarter RCL** is the most common. Students should apply for RCL through OIA starting *around two weeks before the start of the quarter they plan to graduate*.

12.4 Optional Practical Training (OPT) and Curricular Practical Training (CPT)

International students on F-1 visas may be eligible for work authorization through Optional Practical Training (OPT) and Curricular Practical Training (CPT). These opportunities allow students to gain hands-on experience related to their academic program. See sections on OIA website for current information.

12.4.1 OPT Guidelines and Eligibility

- OPT is a temporary employment authorization that allows F-1 students to work in their field of study for up to 12 months (with a potential 24-month STEM extension).
- OPT may be used after graduation or, in limited cases, during academic breaks.
- Students must apply through the U.S. Citizenship and Immigration Services (USCIS) with guidance from the Office of International Affairs (OIA).

12.4.2 CPT Guidelines and Application Process

- CPT allows students to engage in off-campus work or internships as part of their academic curriculum.
- The employment must be integral to the program and approved by the MSDS Program Director.
- Students must be enrolled in a practicum or reading/research course during the period of CPT.
- CPT must be authorized in advance by the OIA.

12.4.3 Procedures for Authorization and Compliance

- Students must receive a formal offer letter describing the nature, location, and duration of employment.
- Authorization must be obtained **before** beginning any work.
- Students are responsible for complying with all federal regulations related to their visa status.

13 Graduation and Beyond

Completing the MSDS program marks a significant achievement. This section outlines the steps for graduation and opportunities available to graduates post-completion.

13.1 Graduation Procedures and Application

To graduate, students must:

- Complete all program requirements, including coursework and the research project.
- Minimum grade of each course, and a cumulative GPA requirement are described in the section "Degree Completion Requirements".
- Follow the directions here from PSD to apply for graduation. The deadline to submit is usually the **end of the first week in the quarter which you plan to graduate**.

Students should review their academic progress with the MSDS director prior to applying to graduate.

13.2 Commencement Ceremony

Graduating students are eligible to participate in the University of Chicago's annual Spring or Winter Quarter commencement ceremonies. DSI may also host additional events for MSDS graduates.

Details about regalia, ticketing, and scheduling are provided by the Office of the University Registrar in the months leading up to graduation.

13.3 For International Students

International students may need to apply for work authorization if they decide to seek employment in the US after graduation. The OPT application information can be found in the International Students section.

13.4 Alumni Engagement Opportunities

Graduates of the MSDS program are part of the broader University of Chicago alumni community. Benefits include:

- Continued access to career services
- Invitations to alumni networking events
- Participation in mentorship programs and industry panels

Alumni are encouraged to stay connected with the Data Science Institute and support future cohorts of MSDS students.

Part IV

Appendix

14 Contacts

The following individuals and offices provide support for MSDS students. Students are encouraged to reach out as needed for academic, administrative, and technical assistance.

14.1 MSDS Program Director

Edwin Lo, Ph.D.
Email: edwinlo@uchicago.edu
Phone: 773.887.2996
Office: Ryerson Lab 257C, 1100 E 58th ST, Chicago, IL
Appointments: edwinlo.youcanbook.me

- Provides academic advising and final approval for research projects, petitions, and policy exceptions.
- Meets with students upon request or referral.

14.2 Program Administrator

Ken Kritikos, M.Ed.
Email: kkritikos34@uchicago.edu
Phone: 773.834.2236
Office: Ryerson Lab 257D, 1100 E 58th ST, Chicago, IL
Appointments: kkritikos34.youcanbook.me

- Primary point of contact for course registration issues, forms, and day-to-day administrative logistics.
- Coordinates orientation, graduation, and program events.

14.3 Others

- Community Safety - UChicago Police Campus phone: 123, Off-campus phone: 773.702.8181
- University general info 773.702.1234
- University IT support 773.702.5800
- Physical Science Division (PSD) general info 773.702.7950
- Data Science Institute general info 773.702.7612
- Office of the Bursar 773.702.8000

15 Links and Glossary

15.1 Important Forms & Links

- UChicago Academic Calendar
- DSI Website
- MSDS Program Page
- Office of International Affairs
- UChicago Student Manual
- UChicago portal for course registrations, grades, personal records, etc. (Might need to use incognito modes for some browsers to access.)

15.2 Glossary of Key Terms

- **CODAS**: Committee on Data Science
- **CPT**: Curricular Practical Training, degree-based or course-based (F-1 Visa student)
- **DSI**: Data Science Institute
- **GPA**: Grade-Point-Average
- **OIA**: Office of International Affairs
- **OPT**: Optional Practical Training (F-1 Visa student)
- **PSD**: Physical Science Division