FROM THE ASSISTANT DEAN

The start of a new school year is always a time of excitement and anticipation. Whether you're on or off campus, this period not just marks the time for all of us to dust our offices and gear up for new classes, but also marks a new beginning filled with endless opportunities. At Eastern, and particularly in the programs in the Department of Mathematical Sciences, this is an enormous period of change, which is really the purpose of this message.

I'm proud to announce that the Department of Mathematical Sciences has officially transitioned into the School of Mathematics and Computational Sciences (SMCS). This change reflects the phenomenal growth we have achieved over the past four years and our dedication to continually enhancing our academic offerings.

The elevation to a school status brings numerous benefits that will directly impact our students and faculty:

First, as you can see elsewhere in The Pulse, DTSC 620: Cloud Foundations will be offered starting FA1. Prof. Jeff Eicher (EU 2023) created this course from scratch after working through Amazon certification himself. While the course will not fully prepare you for the certification exams, it will provide a fantastic introduction to Amazon cloud services and set you up for certification at a later point.

Second, we have heard the demand from students for more instruction in the use of AI and large language models (LLMs), and have thoroughly discussed how to best provide education on these topics. In the coming year we will begin to include modules and projects in select courses on prompt engineering, or how to use LLMs, to expand on the skills taught in these courses. For instance, we might help you use LLMs to deploy your ML models to a website, or how to better refine the Python code you have created in your courses - the possibilities are endless.

Third, within the coming year there are additional courses, certificates, and degrees that are in the works. The elevation to a school will make it much easier for us to create these quickly, and with the resources necessary to assure they are of the highest quality.

As a final note, while we will continue to be housed in the College of Health and Sciences under Dean Tracey Greenwood, I will be taking on the opportunity to lead our school as Assistant Dean with the goal of shepherding the School during this transition and to further growth. Jamie Andrews, our Director of Graduate Programs, will expand his purview, leading many of the day-to-day operations and improvements in our programs. Amy Berrios, our Academic Advising Manager, will continue to have oversight of advising for all of our degrees and certificates.

I'm tremendously proud of the work our team has accomplished in the previous four years. We have expanded beyond anything we dreamt of when we launched the program. If not for our faculty, staff, and GAs, as well as especially our students, we could not have accomplished what we have so far. Here's to a fantastic year and to the continued success of our students, programs, and EU.

DR. GREG LONGO, ASSISTANT DEAN FOR THE SCHOOL OF MATHEMATICS AND COMPUTATIONAL SCIENCES

What is your background?

I'm from Toronto, Canada and I pursued a dual undergraduate degree from the University of Western Ontario in London. I studied Applied Mathematics and Business. Upon graduation in 2022, I worked as an Investment Banking Analyst in the Power and Utilities sector at Scotiabank for a year before I began the MSDS program.

As an Alumni of the MSDS program, what was your favorite class?

My favorite class was DTSC 680 Applied Machine Learning. I really enjoyed how we dove into several machine learning algorithms and learned about their real-world applications. I found it particularly interesting how we learned the step-by-step mathematical processes involved in building the algorithms.

What sort of job offers did you receive after graduation?

Immediately after graduation, I began a volunteer position as the Co-Lead of the Machine Learning Math community at Cohere for AI, a Canadian AI start-up. I've been offered other positions at AI Health Start-Ups, and positions as a Math Lecturer and as an AI Consultant Speaker.

What skills or knowledge did you learn throughout the program that you found most useful in your career?

I found learning how to manipulate large datasets to be very useful and applicable to my current research. Additionally, learning how to run end-to-end machine learning models has helped me build a strong foundation and has given me the necessary tools to build more and more complex models.

Any advice to the students in the program?

Dive into all the resources that you are given and read the associated material in the textbook. Data Science is ever evolving but a strong technical foundation will set you up well. Work on building relationships with fellow students, GAs, and professors. Everyone is so kind and helpful, and the community has so much to offer you!

Katrina Lawrence

Outside the world of machine learning, I like to balance out academic work with sports, arts, and music. I'm a black belt in karate and a former member of Team Canada. I continue to train in the martial art and teach weekly children's classes. I also teach women's self-defense classes in the community. On the other hand, I enjoy hiking in nature, and capturing the scenery with a paintbrush. I'm an avid painter and am inspired by the work of the Group of Seven. In addition, a goal of mine this year is to learn Scottish Gaelic!

INTRODUCING OUR NEWEST COURSE:
DTSC-620 CLOUD FOUNDATIONS

The MSDS/DA program is pleased to announce a new course: DTSC-620 Cloud Foundations! Students have been requesting a course that covers cloud concepts for several years, and the demand for cloud skills has only increased.

What is DTSC-620 "Cloud Foundations"?
This course will introduce students to the advantages and vocabulary of cloud computing. Students will gain exposure and experience with cloud-based core resources for compute, storage, database, and networking tasks. Students will explore best practices for cloud architecture, including operational excellence, security, shared responsibility, cost optimization, reliability, and scalability.

Why should someone take this course? What will I learn?
Many organizations are shifting their workloads to the cloud, or at least a hybrid on-premises plus cloud model. Having employees who are familiar with cloud terminology, benefits, solutions and services is a growing area of need among employers. A main focus of the course is to prepare students for the AWS Cloud Practitioner certification exam.

Is it required?
DTSC-620 is not a required course. It is an elective for both the MSDS and MSDA.

If I decide to take this course as an elective, at what point should I take the course in my course progression?
As a 600 level course, we recommend you take this course after you have taken at least one 500-level course.

How do I decide if I should take this course as one of my electives or another course?
Check out positions that you're interested in. Do they require cloud skills? What cloud provider (AWS, Google, Azure, Oracle, etc.) do they use?

Does the course focus on one cloud provider or is it cloud-agnostic?
There are pros and cons to both approaches, but we decided to focus on a particular cloud provider (Amazon Web Services - AWS) both for its top-tier position in the market and the ability to practice with services free-of-charge with AWS Academy.

Many of the concepts we discuss can be generalized across cloud providers.

I use cloud technologies regularly with my current role. Should I take this course?
This course covers areas such as compute, security, networking, storage, databases, architectural features, and more. If you work regularly with these areas, this course may not be for you.

What are the assignments like?
As a foundational course, it is heavy on exams. It has seven exams and a final exam, along with roughly eight hands-on labs using Amazon Web Services (AWS).

What is the AWS Cloud Practitioner certification?
Amazon Web Services (AWS) offers several certification exams for individuals to verify and show off their skills with cloud services and solutions. The first foundational certification is the AWS Cloud Practitioner certification. It is proctored either in-person or online and consists of 65 multiple-choice or multi-select questions in 90 minutes. It costs $100. You can learn more about the exam here.

Am I "AWS-certified" if I pass this course?
No. You must take and pass the official AWS Cloud Practitioner certification exam. Some boot camps and programs claim that you are "AWS-certified" after taking their course, but you need to pass the exam from AWS to be truly certified.

What kind of cool data science or data analytics projects will we be doing?
As a foundational course, we focus on the breadth of concepts, rather than using a particular cloud service to do data science. We want students to have experience using Amazon Web Services but we do not have labs "doing" analytics; they are more basic than that. This is part of our effort to be a "data science for all" program – many individuals have zero experience with the cloud, so this is the first step towards using the cloud to do more advanced tasks like ML, NLP, and AI.

Enrollment in the first two terms will be capped; first come, first serve. Beginning in Sp1-2025, there will be no caps on enrollment.

CONGRATULATIONS!

Dr. Gregory Longo
promoted to
Assistant Dean for the School of Mathematics and Computational Sciences

SOCIAL MEDIA

We're excited to announce that we're now on Instagram, Facebook, LinkedIn! 🚀

Stay in touch by following us!

ADVISING

Term Dates
Withdraw without academic penalty:
- August 18th by 5:00 pm ET

SU2 ends: August 18t at 11:59 pm ET
- Grades posted within 1 - 2 weeks

Important Reminders
- The last day to register for Fall 1 is Monday, August 26
- The last day to register for Fall 2 is Monday, October 21

📚✨ Keep up with all the important dates and make the most of your student journey! Subscribe to Student: MSDS/DA Calendar

Guide to Not Getting Scammed: Tips from EU's CIO

NEW COURSE ASSISTANTS

- **Karl Sutterlin: GA 520**
- **Matthew Delgado: GA 520**
- **Ann Nelson: GA 520**
- **Parmida Atashzay: GA 550**
- **Ali Rizvi: GA 550**
- **Robert McCann: GA 550**
- **Kelly Trump: GA 560**
- **Jaime Clemons: GA 560**
- **Zaida Bryce: GA 600**
- **Melissa Raley: AA 650**
- **Amber Mayfield: GA 660**
- **Lindsay Aiello: GA 670**

FAITH AND COUNSELING

Counseling and Crisis Services
Services through Uwill are available to all students and include 24/7/365 crisis support.
- [Click here for the Uwill website](#)
- [See the Uwill FAQ](#)
- **Uwill Crisis Line**: 833-646-1526 (outside the US, Canada and Caribbean call +1-984-268-2016)

EU Chapel Livestream:
- [Watch Live Chapel](#)
- [Recorded Chapel (YouTube)](#)
- [Chapel Schedule](#)

University Chaplain:
[Dr. Joseph Modica](#)

Contact Us:
General Questions: datascience@eastern.edu
Advising Questions: dsadvising@eastern.edu
Fees and Billing: student.accounts@eastern.edu

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