



# Online Master of Science in Analytics

Information Session

# Agenda

- » Meet the team
- » Why Georgia Tech?
- » Program curriculum
- » Program format
- » edX MicroMasters
- » Foundational course opt-out
- » Program prerequisites
- » Application requirements (including English proficiency requirement)
- » Program cost
- » Summary (key points already covered)
- » Q&A

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# Meet the Team



**Dr. Joel Sokol**

Director, Master of Science in Analytics  
Professor, Stewart School of ISyE



**Jennifer Wooley**

Director, Academic Programs & Student Services  
Professional Education

# Meet the Team



**Yvonne McKinnon**  
Academic Program  
Manager

» **Heather Paige**  
Academic Advisor

» **Katie Beccue**  
Academic Advisor



**Justin LaFantano**  
Academic Advisor

» **Robyn Presley**  
Academic Advisor

» **Tiara Anderson**  
Academic Advisor

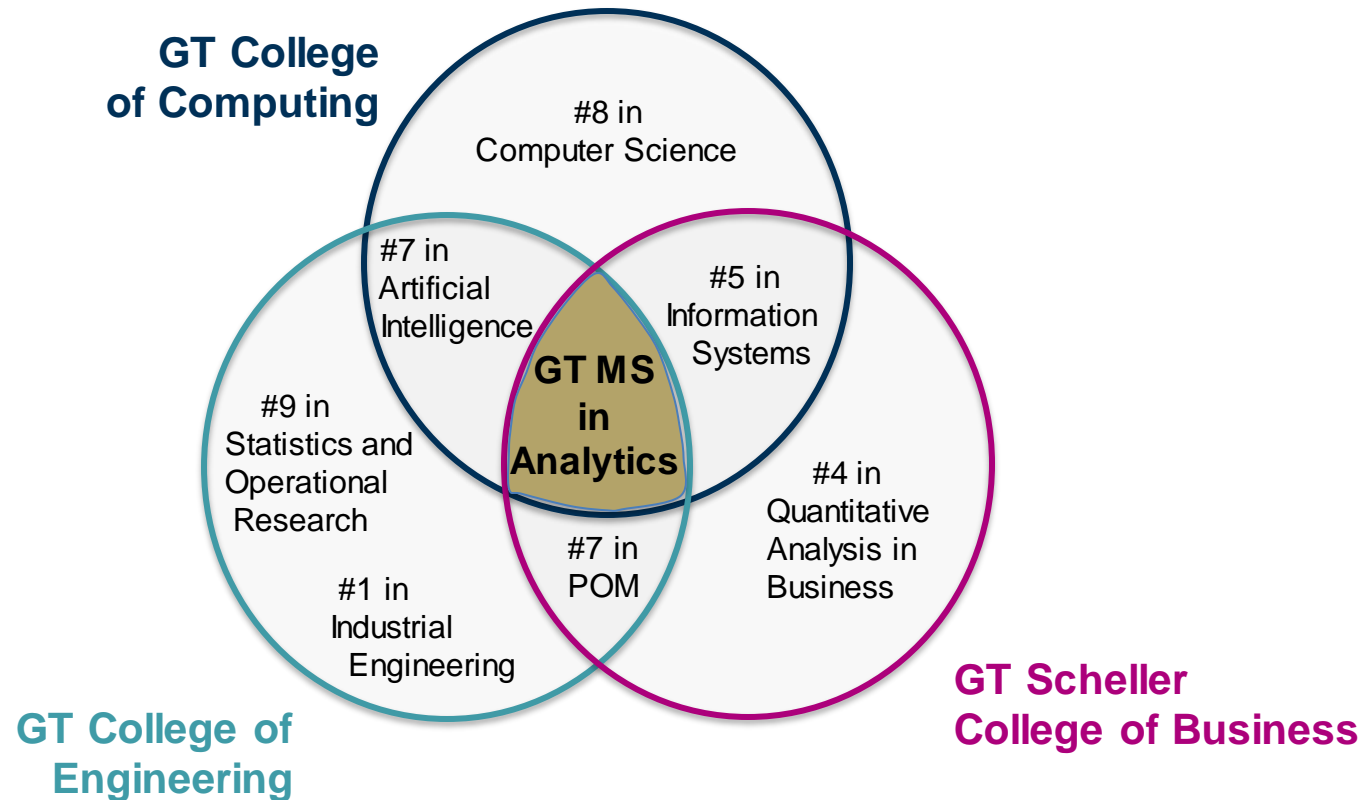
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# Analytics/Data Science: GT's interdisciplinary approach

» ...the ability to use **statistics, quantitative analysis** and **information-modeling techniques** to shape and make **business decisions**. (Accenture)



# What makes GT's MS Analytics unique?

## Curriculum

### » Breadth and interdisciplinarity

- Core covers wide range of analytics areas
- Application areas, statistics/OR/ML models, software tools, programming languages, etc.
- Learning-how-to-learn emphasis
- True interdisciplinary integration
  - College of Engineering (Statistics/OR)
  - College of Computing
  - Scheller College of Business

### » Depth by specialization

- Choice of tracks: analytical tools, business analytics, computational data analytics

### » Depth by personalization

- 50% of course slots are electives
  - **60+** courses to choose from (fewer online)
- Build a program to match interests/goals

## Requirements

### » Outstanding analytics potential

- Even without any analytics-related training
  - Anthropology, Astrophysics, Chemistry, Law, Medicine, Political Science, Psychology, Religion, Theater, etc.

### » Minimal prerequisite coursework

- At least one course in each of
  - Calculus
  - Computer Programming in Python
  - Linear Algebra
  - Calculus-based Probability/Statistics
- Students without even this background **can be admitted** to the program and then take their prerequisite courses

### » Result: Richly diverse range of student backgrounds



# MS Analytics options

	Full-Time	Part-Time	MS/MBA Option?	Electives Offered	Instruction Format	Tuition for Full Degree	Top-10 Ranking
<b>MS in Analytics (GT Degree)</b> <i>On-campus</i> (Fall 2014 - )	✓	✓	✓	70+	Fully face-to-face	~\$36,000 (GA) ~\$49,000 (Other)	✓
<b>MS in Analytics (GT Degree)</b> <i>Online</i> (Fall 2017 - )	✓	✓	✓ <small>(in Atlanta w/ Evening MBA)</small>	20+ <small>(Same faculty as on-campus)</small>	Fully online	<b>\$9,900</b> <small>(No perqs)</small>	✓
<b>MicroMasters</b> (edX certificate) <b><i>Analytics: Essential Tools and Methods</i></b>		✓		N/A <small>(Three required courses)</small>	Fully online	<b>\$2,475</b> <small>(Could count towards online degree and/or strengthen application)</small>	

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<b>Interdisciplinary Core</b>	<b>Basic</b>	<b>CSE 6040: Computing for Data Analysis</b> <b>MGT 8803/6754: Business Fundamentals for Analytics</b> <b>ISYE 6501: Intro to Analytics Modeling</b>		
	<b>Advanced</b>	<b>CSE 6242: Data and Visual Analytics</b>	<b>MGT 6203: Data Analytics in Business</b>	<b>ELECTIVES: 2 Statistics, 1 Operations Research</b>
<b>Tracks and Electives</b> <ul style="list-style-type: none"> <li>▪ Analytical Tools</li> <li>▪ Business Analytics</li> <li>▪ Computational Data Analytics</li> </ul>	<b>Analytical Tools Electives</b>	<b>Business Analytics Electives</b>	<b>Computational Data Analytics Electives</b>	
	<b>ISYE 6420: Bayesian Statistics</b> <b>ISYE 6740: Computational Data Analysis (Machine Learning)</b> <b>ISYE 6669: Deterministic Optimization</b> <b>ISYE 6414: Regression Analysis</b> <b>ISYE 6644: Simulation</b> <b>ISYE 6402: Time Series Analysis</b> <b>ISYE 7406: Data Mining and Statistical Learning</b> <b>ISYE 8803: High-Dimensional Data Analytics</b>	<b>MGT 8823: Data Analysis for Continuous Improvement</b> <b>MGT 6311: Digital Marketing</b> <b>MGT 8813: Financial Modeling</b> <b>MGT 8833: Privacy for Professionals</b>	<b>CSE 6250: Big Data in Healthcare</b> <b>ISYE 6740: Computational Data Analysis (Machine Learning)</b> <b>CS 6400: Database Systems</b> <b>CS 6601: Artificial Intelligence</b> <b>CS 6750: Human Computer Interaction</b> <b>CS 7637: Knowledge-Based AI</b> <b>CS 7642: Reinforcement Learning</b> <b>CS 7643: Deep Learning</b> <b>CS 7646: Machine Learning for Trading</b>	
<b>Practical Experience</b>	<b>ISYE/MGT/CSE 6748: Applied Analytics Practicum</b>			
Courses are subject to change.				

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# Program format

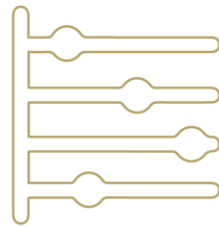


36 credit hours;  
11 courses



Online courses are offered in three terms:

Fall (Aug. – Dec.),  
Spring (Jan. – May),  
Summer (May – Aug.)



Courses are 16 weeks long in Fall & Spring,  
11 weeks in Summer



100% online courses



Lessons can be viewed at any time during the week once released



Instructional team will have live office hours to answer questions



Online proctoring system used for exams

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# edX MicroMasters

- » Analytics: Essential Tools and Methods MicroMasters certificate from edx.org
- » Three MS Analytics courses:
  - ISYE 6501: Introduction to Analytics Modeling
  - CSE 6040: Computing for Data Analytics
  - MGT 6203: Data Analytics in Business
- » Possibility to use these toward the MS Analytics degree
  - By petition only (if admitted)
  - Petition might not be approved
- » All OMSA students are required to register for all courses through Georgia Tech once they begin the OMSA program; MicroMasters sections taken after starting the program will not be counted. For example, a student who starts the OMSA program in Fall 2022 may only petition to get credit for MicroMasters courses taken in Summer 2022 or earlier.

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# Opting out of foundational courses

- » Possibility to replace foundational course(s) with an elective
  - CSE 6040: Introduction to Computing for Data Analysis
  - ISYE 6501: Introduction to Analytics Modeling
  - MGT 8803/6754: Business Fundamentals for Analytics
  
- » **Only** if you have sufficient background in the area of the replaced course
  - After admission to program, the program will distribute a form for you to complete

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# Prerequisites

- » **Calculus** (to include [topics covered](#) in MATH 1712: Survey of Calculus)
- » [Probability and Statistics](#) (topics as covered in ISYE 6739)
- » [Basic Linear Algebra](#) ([topics](#) as covered in Math 1553)
- » [Computing in Python](#) (topics as covered in CS 1301)
- » **(Optional) R Basics for Data Science**

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# Application requirements



All applicants must hold a **U.S. four-year baccalaureate** degree from a regionally accredited institution **or its equivalent** or higher from an institution authorized to award degrees by an appropriate government agency (e.g., Ministry of Education, University Grants Commission).

Only some three-year bachelor's degrees are considered equivalent to a U.S. bachelor's degree, so having one doesn't guarantee eligibility for a Georgia Tech graduate program.

If you completed your education outside the United States and want to determine equivalency, we highly recommend using one of these **Georgia Tech-approved credential evaluation services**:

- IEE
- Educational Perspectives
- SpanTran Pathways

There is a fee for these types of evaluations; however, the three service providers listed above have agreed to offer Georgia Tech applicants a discount.

# Requirement: college transcripts



- **During the application process, you can upload unofficial transcript(s).** We define an unofficial transcript as either an official electronic transcript, or an official paper transcript, that you (the applicant) have scanned, uploaded or emailed to us. *The Graduate Admission Committee doesn't accept: self-printed academic histories, web-based academic evaluations, or anything typed or handwritten. If you submit any such documents, the committee won't review your application.*
- **If you're accepted into the program, please submit official versions** of all transcript(s) ASAP. (Requesting these documents can take months, so don't procrastinate.)
- You must submit a transcript/academic record for **every institution of higher education you attended, even if you didn't earn a degree there.**

# Requirement: international academic credentials/documents



- You must submit academic credentials/documents (transcripts, marksheet or diploma supplement) in the **native language** and provide an **English translation by an official translation agency**, unless your institution issues academic credentials/documents in English.
- If you completed your education outside the United States, we highly recommend using one of these **Georgia Tech-approved credential-evaluation services**: IEE, Educational Perspectives, or SpanTran Pathways.
- If you don't use one of these three credential-evaluation services, your credentials/documents will be evaluated **in-house by the Office of Graduate Studies**. *Due to their limited number staff with this expertise, the in-house evaluation process takes longer. It may even delay your admission to the next application term.*

# Application requirements



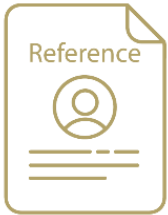
A **professional resume or curriculum vitae (CV)** that provides a summary of your experiences, education, achievements and skills



A **Statement of Purpose** that includes:

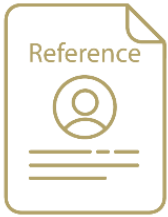
- your goals and career plans
- the experience you bring to the program
- what you want to take away from the program
- any other information you feel is useful for the admission committee

# Requirement: three letters of recommendation



- Identify **three** recommenders well before the submission deadline, so they have plenty of time to complete their letters.
- Letters of recommendation should go beyond saying you're “a great person” or “the go-to for all answers.” Recommenders should be individuals with firsthand knowledge of your **academic abilities** or your **professional skills and performance**. They should be familiar with **any technical expertise you have** that's relevant to analytics or the foundational knowledge in this degree program's prerequisites. Recommenders also should be able to cite evidence of a **maturity level** that's compatible with performing well in graduate school.
- Your recommenders can be current or former: professors, supervisors or senior professionals. *They should not be peers or classmates.*

# Requirement: three letters of recommendation



## How to submit letters of recommendation:

1. Enter your recommenders' information into your online application.
2. They will then receive an email inviting them to complete an online recommendation.
3. Submit your application once you've completed all the other requirements; don't wait for your recommenders to complete their recommendations. As each recommender completes his/her recommendation letter, it will automatically match with your application and become part of the final submission.



# Requirement: English language proficiency



Georgia Tech requires that **all applicants** demonstrate **proof of English language proficiency** at the time of application.

Applicants, who are not U.S. citizens or Permanent Residents, can meet this requirement using one of the following options:

## 1. GTLI English Language Assessment

A GTLI English Language Assessment Specialist will conduct this assessment in a 90-minute interactive, audio- and video-recorded online session. The assessment consists of two main parts: a speaking/listening section and a writing section. You will receive a score on a 3.0 scale and must secure a score of 3.

The interpretation of the scoring, as well as additional details about the assessment, are available at: <https://esl.gatech.edu/english-proficiency-assessments-graduate-students>

# Requirement: English language proficiency

TOEFL  
IELTS



## 2. TOEFL:

The required minimum total score on the TOEFL exams is:

- Internet-based TOEFL exam = 100, with minimum section scores of 20 or higher on each skill area
- Paper-based TOEFL exam = 600

## 3. IELTS Academic:

- Listening – 6.5
- Reading – 6.5
- Speaking – 6.5
- Writing 6.0
  
- Overall – 7.5

# Requirement: English language proficiency



4. You are exempt from submitting standardized test scores (TOEFL or IELTS) if you meet one of the following criteria:

- A. Citizenship from one of the countries or territories listed below, or
- B. Attended a university or college for a minimum of one academic year (3 quarters or 2 semesters) in one of the countries or territories listed below.

American Samoa	Ghana	South Africa
Australia	Guam	Trinidad and Tobago
Bahamas	Guyana	U.S. Virgin Islands
Barbados	Ireland	Uganda
Belize	Jamaica	United States
Bermuda	Kenya	United Kingdom
Botswana	New Zealand	Zambia
British Virgin Islands	Nigeria	Zimbabwe
Canada, except Quebec	Puerto Rico	
Ethiopia	Singapore	

# Requirement: English language proficiency



- You must take the exam prior to submitting your application.
- Scores are good for two-years and must be valid on the first day enrollment into the program if admitted
- Living and working in the United States does not, on its own, satisfy the English Language Proficiency requirement (this includes H1-B visas)

# Application requirements (continued)

GMAT  
GRE



**GRE** and **GMAT** Scores are not required:

- Submitting scores can strengthen your application if your quantitative scores are at or above the 90<sup>th</sup>-95<sup>th</sup> percentile
- Not submitting a GRE or GMAT score will have **no adverse effect** on your application.



The application fee is \$75 domestic, \$85 international



We admit for Fall and Spring only (continuing students can take summer courses)

# Application deadlines (online) and status checking

## » Fall

- February 1 – Standard application deadline
- March 15 – Final application deadline
- August – Classes begin

## » Spring

- June 15 – Standard application deadline
- August 1 – Final application deadline
- January – Classes begin

## » **Status checking** is the fastest way to see where your application is in the process.

- Once your application is submitted you can check your [application status here](#)
- You will sign in using the same email and password used when you applied
- You have the ability to upload missing application materials via this application status page



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# Tuition and fees

## » Tuition

- \$275 per semester credit hour

## » Mandatory student fees

- \$301 in mandatory fees (\$107 in technology fees + \$194 in special institutional fees)

# Payment options

Bursar & Treasury Services: <http://bursar.gatech.edu/content/payment-options>

- » Georgia Tech [Payment Plan](#)
- » [3rd party billing](#)
- » Employer Tuition Assistance
- » Financial aid – only if taking 2 courses

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# Let's Review



## Curriculum

- You can change tracks and/or complete more than one track
- You can petition to opt out of one or more foundational course if you have sufficient academic or professional experience (i.e., MBA opting out of Business Fundamentals for Analytics or a Computer Science major opting out of Computing for Data Analysis)
- If you complete one or more of the edX MicroMasters courses as a verified learner, before admittance to the OMS Analytics program, you can petition for "advanced standing." If you take any of them after admittance, it's less likely that an advance-standing request will be approved.
- We highly recommend that working professionals take no more than 1-2 courses per semester
- You have six years from your first semester to complete the program

# Let's Review



## Application Requirements

- You can complete the program prerequisites by enrolling in a Massive Open Online Course on edX or another online platform; a certificate of completion is not required
- Your personal statement should include: your goals and career plans, the experience you bring to the program, what you want to take away from the program, and any other information you feel is useful for the admission committee
- You can use unofficial transcripts to submit your application
- Applicants are not required to submit GRE or GMAT scores with their applications. If you believe your score may strengthen your application, feel free to submit it. Please note that while a high GRE or GMAT score may strengthen your application, not submitting a GRE or GMAT score will have **no adverse effect** on your application

# Let's Review



## Application Requirements

- The application fee is \$75 domestic, \$85 international
- We admit for Fall and Spring only (continuing students can take summer courses)
- We require 3 letters of recommendation (recommenders must submit their recommendations using the link they receive via email)

# Let's Review



## International Applicant Requirements

- International applicants must have their transcripts translated to English. For the fastest turn-around time, we recommend using one of these three Georgia Tech-approved credential evaluation services:
  - IEE
  - Educational Perspectives
  - SpanTran Pathways
- English Language Proficiency is required and can be fulfilled using scores from GTLI, TOEFL or IELTS
- Living and/or working in the U.S. does not qualify as an English Language Proficiency exemption (unless you are a PR or Citizen)

# Let's Review



## Application deadlines

- Standard application deadline for Fall 2022 applications – February 1 at 11:59 p.m. ET
- Final application deadline for Fall 2022 applications – March 15 at 11:59 p.m. ET



## Degree name

- The name "Online" is an informal designation to help distinguish the delivery method of the online program
- Your diploma will simply say "**Master of Science in Analytics**"



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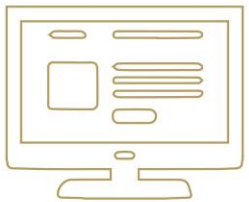
# Questions?



**Contact us:** <http://bit.ly/contact-omsanalytics>



**Phone:** 404-385-5700



**Website:** <https://pe.gatech.edu/degrees/analytics>



**Operating hours:** Monday – Friday, 8:00 a.m. – 5:00 p.m. ET

# Additional prerequisite resources

# OMS Analytics-recommended prerequisites

## Probability and Statistics - NEW (topics as covered in ISYE 6739)

- » [Probability and Statistics I](#): A Gentle Introduction to Probability
- » [Probability and Statistics II](#): Random Variables
- » [Probability and Statistics III](#): A Gentle Introduction to Statistics
- » [Probability and Statistics IV](#): Confidence Intervals and Hypothesis Tests

## Basic Linear Algebra - NEW ([topics](#) as covered in Math 1553)

- » [Linear Algebra I](#): Linear Equations
- » [Linear Algebra II](#): Matrix Algebra
- » [Linear Algebra III](#): Determinants and Eigenvalues
- » [Linear Algebra IV](#): Orthogonality & Symmetric Matrices and the SVD

# OMS Analytics-recommended prerequisites

**Computer Programming (topics as covered in Intro to Computing CS 1301)**

- » [Python I](#): Fundamentals and Procedural Programming
- » [Python II](#): Control Structures
- » [Python III](#): Data Structures
- » [Python IV](#): Objects & Algorithms

**We also recommend using edX to find a comparable course for:**

- » **Calculus** (to include [topics covered](#) in MATH 1712: Survey of Calculus)
- » **R Basics for Data Science**