Online Master of Science in Analytics
Advisor Q&A Session I Fall 2020
Agenda

- Welcome: Meet the Team
- OMS Analytics Curriculum & Prerequisite Knowledge
- GPA and Grade Requirements: Academic Standing
- DegreeWorks
- Registration
- Graduation & Commencement
- Q&A
Online Master of Science in Analytics

Meet the Team
Meet the Team

Jennifer Wooley
Director, Professional Master’s Programs, Professional Education

Justin LaFantano
Academic Advisor

Yvonne McKinnon
Academic Advisor
Online Master of Science in Analytics

MS Analytics Curriculum & Prerequisite Knowledge
# CSE 6242: Data and Visual Analytics

# ISYE/MGT/CSE 6748: Applied Analytics Practicum

**Interdisciplinary Core**

<table>
<thead>
<tr>
<th>Basic</th>
<th>Advanced</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 6242: Data and Visual Analytics</td>
<td>MGT 6203: Data Analytics in Business</td>
<td>ELECTIVES: 2 Statistics, 1 Operations Research</td>
</tr>
</tbody>
</table>

**Tracks and Electives**

<table>
<thead>
<tr>
<th>Analytical Tools Electives</th>
<th>Business Analytics Electives</th>
<th>Computational Data Analytics Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYE 6420: Bayesian Statistics</td>
<td>MGT 8823: Data Analysis for Continuous Improvement</td>
<td>CSE 6250: Big Data in Healthcare</td>
</tr>
<tr>
<td>CS 7641 or ISYE 6740: Computational Data Analysis (Machine Learning)</td>
<td>MGT 6311: Digital Marketing</td>
<td>ISYE 6740: Computational Data Analysis (Machine Learning)</td>
</tr>
<tr>
<td>ISYE 6414: Regression Analysis</td>
<td>MGT 8833: Privacy for Professionals</td>
<td>CS 6601: Artificial Intelligence</td>
</tr>
<tr>
<td>ISYE 6644: Simulation</td>
<td></td>
<td>CS 6750: Human Computer Interaction</td>
</tr>
<tr>
<td>ISYE 6402: Time Series Analysis</td>
<td></td>
<td>CS 7637: Knowledge-Based AI</td>
</tr>
<tr>
<td>ISYE 8803: High-Dimensional Data Analytics</td>
<td></td>
<td>CS 7642: Reinforcement Learning</td>
</tr>
<tr>
<td>ISYE 8803: High-Dimensional Data Analytics</td>
<td></td>
<td>CS 7646: Machine Learning for Trading</td>
</tr>
</tbody>
</table>

**Practical Experience**

- ISYE 6420: Bayesian Statistics
- ISYE 6414: Regression Analysis
- ISYE 6402: Time Series Analysis
- ISYE 6403: High-Dimensional Data Analytics
- ISYE 6414: Regression Analysis
- MGT 6203: Data Analytics in Business
- MGT 8823: Data Analysis for Continuous Improvement
- MGT 6311: Digital Marketing
- MGT 8813: Financial Modeling
- MGT 8833: Privacy for Professionals
- CSE 6250: Big Data in Healthcare
- ISYE 6740: Computational Data Analysis (Machine Learning)
- CS 6400: Database Systems
- CS 6601: Artificial Intelligence
- CS 6750: Human Computer Interaction
- CS 7637: Knowledge-Based AI
- CS 7642: Reinforcement Learning
- CS 7646: Machine Learning for Trading

Courses are subject to change.

---

Online Master of Science in Analytics
# OMS Analytics Curriculum: Electives

<table>
<thead>
<tr>
<th>Statistics Electives</th>
<th>Operations Research Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CS 7641:</strong> Machine Learning**</td>
<td><strong>ISYE 6644:</strong> Simulation</td>
</tr>
<tr>
<td><strong>ISYE 6402:</strong> Time Series Analysis*</td>
<td><strong>ISYE 6669:</strong> Deterministic Optimization*</td>
</tr>
<tr>
<td><strong>ISYE 6414:</strong> Regression Analysis</td>
<td></td>
</tr>
<tr>
<td><strong>ISYE 6420:</strong> Bayesian Statistics*</td>
<td></td>
</tr>
<tr>
<td><strong>ISYE 6740:</strong> Computational Data Analytics</td>
<td></td>
</tr>
<tr>
<td><strong>ISYE 7406:</strong> Data Mining and Statistical Learning</td>
<td></td>
</tr>
<tr>
<td><strong>ISYE 8803:</strong> Topics on High Dimensional Data Analytics</td>
<td></td>
</tr>
</tbody>
</table>

*Electives not offered in Summer

**No longer in OMS Analytics curriculum; replaced with ISYE 6740
OMS Analytics Recommended Prerequisites

- **CSE 6040**: Computing for Data Analysis – Python
- **ISYE 6501**: Introduction to Analytics Modeling – R
- **MGT 8803**: Business Fundamentals for Analytics – Accounting and Finance
- **CSE 6242**: Data and Visual Analytics – CSE 6040
- **MGT 6203**: Data Analytics in Business – ISYE 6501
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**
Sample Programs *(Yours Can Vary)*

<table>
<thead>
<tr>
<th>Two courses per semester, Fall start</th>
<th>Two courses per semester, Spring start</th>
<th>One course per semester, Fall start</th>
<th>One course per semester, Spring start*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>Spring</td>
<td>Fall</td>
<td>Spring</td>
</tr>
<tr>
<td>ISYE 6501</td>
<td>ISYE 6501 CSE 6040*</td>
<td>ISYE 6501</td>
<td>CSE 6040*</td>
</tr>
<tr>
<td>CSE 6040*</td>
<td>SUMMER MGT 8803</td>
<td>SUMMER MGT 8803</td>
<td>SUMMER MGT 8803</td>
</tr>
<tr>
<td>SUMMER MGT 6203</td>
<td>SUMMER CSE 6242*</td>
<td>SUMMER CSE 6242*</td>
<td>SUMMER CSE 6242*</td>
</tr>
<tr>
<td>Fall</td>
<td>Spring</td>
<td>Fall</td>
<td>Spring</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Elective</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
</tr>
<tr>
<td>SUMMER Elective</td>
<td>SUMMER CSE 6242*</td>
<td>SUMMER CSE 6242*</td>
<td>SUMMER CSE 6242*</td>
</tr>
<tr>
<td>SUMMER Elective</td>
<td>SUMMER MGT 6203</td>
<td>SUMMER MGT 6203</td>
<td>SUMMER MGT 6203</td>
</tr>
<tr>
<td>SUMMER Practicum**</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
</tr>
<tr>
<td>SUMMER Practicum**</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
</tr>
<tr>
<td>SUMMER Practicum**</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
</tr>
<tr>
<td>SUMMER Practicum**</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
<td>SUMMER Elective</td>
</tr>
</tbody>
</table>

* CSE 6040 and CSE 6242 are not offered in Summer
** Can be taken with up to two courses
➢ Courses can be taken out of order if you are proficient in math and programming
Courses Not Offered in the Summer

- **CS 6601**: Artificial Intelligence
- **CS 7637**: Knowledge-Based AI
- **CS 7642**: Reinforcement Learning
- **CSE 6040**: Computing for Data Analysis
- **CSE 6242**: Data and Visual Analytics
- **CSE 6250**: Big Data Analytics in Healthcare
- **ISYE 6402**: Time Series Analysis
- **ISYE 6420**: Bayesian Statistics
- **ISYE 6669**: Deterministic Optimization
Six-Hour Practicum

The prerequisites for registration are the completion of at least eight courses including CSE 6242 and MGT 6203 prior to and not concurrent with the practicum (exceptions are reviewed on a case-by-case basis).

The practicum is different for everyone; because students are employed in every imaginable industry and have varying amounts of data to report, the purpose of the practicum is to have some freedom in the project you formulate, but ensuring you use the knowledge gained in the program to produce the desired outcome.

Students can complete their practicum project with their current employer, internship, or sponsor. Students are responsible for finding their own internship.

The course is by permit only and a “Call to Action” email is sent out prior to each term (February for Summer, May for Fall, and September for Spring).
Online Master of Science in Analytics

GPA and Grade Requirements: Academic Standing
GPA and Grade Requirements: Academic Standing

The Institute's academic standing is based on both the term (semester) grade point average and the cumulative average of the students' performance.

The minimum term and overall grade point averages for a student to be designated as having Good Standing is 2.7.

A grade of "D" can be earned in any course; however, it will impact and reduce the GPA.

A student can retake a course that they did not perform well in, but the GPA will still calculate all grades and there is no grade replacement.

Students are not dismissed with their first instance of poor performance, but subsequent poor performance can result in academic dismissal.
# GPA and Grade Requirements: Academic Standing

<table>
<thead>
<tr>
<th>Academic Standing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Student is not on academic warning or probation; is maintaining satisfactory academic progress</td>
</tr>
<tr>
<td>Warning</td>
<td>Student’s most recent academic performance has been unsatisfactory, or the overall average is below the minimum requirement. Academic warning is a subcategory of good academic standing, differing only in the maximum allowable schedule load.</td>
</tr>
<tr>
<td>Probation</td>
<td>Student’s most recent academic performance has been extremely unsatisfactory, or the term average has continued to be unsatisfactory or the overall academic average has continued to be below the minimum requirement.</td>
</tr>
<tr>
<td>Review</td>
<td>Student who normally would be dropped from the rolls due to academic deficiencies but appears from the record not to have completed the term. Student cannot be enrolled on Review status and should contact their major school for further information.</td>
</tr>
<tr>
<td>Drop/Dismissal</td>
<td>Student has been dropped from the rolls due to academic deficiencies. Student may apply for readmission after an absence of one term unless this is second Drop/Dismissal. Students on Drop should seek advisement from their major school regarding future re-admission.</td>
</tr>
</tbody>
</table>
GPA and Grade Requirements: Academic Standing

We highly recommend reading over these websites that outline the academic policies as well so you have as much information as possible:

- [http://catalog.gatech.edu/rules/6/](http://catalog.gatech.edu/rules/6/) and
- [https://registrar.gatech.edu/info/academic-standing](https://registrar.gatech.edu/info/academic-standing)

It is recommended that students earn a "B" or better in their courses to show they have a solid grasp on the material in the program.
Online Master of Science in Analytics

DegreeWorks
DegreeWorks

https://degreeaudit.gatech.edu/

Use to:
  ➤ View your curriculum requirements
  ➤ View your grades
  ➤ Use for employment verification

How to use it:
  ➤ Enter your GTID
  ➤ Hit enter
# DegreeWorks

## Georgia Tech DegreeWorks Audit

<table>
<thead>
<tr>
<th>Student View</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall GPA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree Candidate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Standing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation Information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Disclaimer**

You are encouraged to use this degree audit report as a guide when planning your progress toward completion of the above requirements. Your academic advisor or the Registrar's Office may be contacted for assistance in interpreting this report. This audit is not your academic transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding this degree audit report, your official degree/certificate completion status, or to obtain a copy of your academic transcript.
When you are granted a waiver, it doesn't "remove" the requirement, it just allows us to "replace" the requirement with an elective.
# DegreeWorks

## MSANLT - 2 Advanced Core Requirements
- **Unmet conditions for this set of requirements:** 6 Credits needed
  - Data & Visual Analytics: Still Needed: 1 Class in CSE 6242*
  - Data Analytics in Business: Still Needed: 1 Class in MGT 6203*

## MSANLT - 3 Statistics Requirement
- **Unmet conditions for this set of requirements:** 6 Credits needed
  - Statistics Electives: Still Needed: 2 Classes in ISYE 6402* or 6404* or 6413* or 6414* or 6416* or 6420* or 7406* or 8803 Title = High-Dimensional Data Analytic or 8803 Title = ST: High-Dimensional Data Anal or CSE 6740* or ISYE 6740*

## MSANLT - 4 Operations Research Requirement
- **Unmet conditions for this set of requirements:** 3 Credits needed
  - Operations Research Elective: Still Needed: 1 Class in ISYE 6644* or 6550* or 6669*

## MSANLT - 5 Applied Analytics Practicum Requirement
- **Unmet conditions for this set of requirements:** 6 Credits needed
  - Applied Analytics Practicum: Still Needed: 1 Class in ISYE 6748 or CSE 6748 or MGT 6748

---

*Online Master of Science in Analytics*
# DegreeWorks

**MSANLT - Track Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track Electives</td>
<td>Choose from 1 of the following:</td>
</tr>
<tr>
<td>Analytical Tools Track Electives</td>
<td>( 2 Classes in ISYE 6402* or 6404* or 6413* or 6414* or 6416* or 6420* or 7406* or 6644* or 6650* or 6669* or 8803 Title = High-Dimensional Data Analysis or CSE 6740* or ISYE 6740* or CS 7641* ) or</td>
</tr>
<tr>
<td>Business Analytics Track Electives</td>
<td>( 2 Classes in MGT 6311* or 8813 Title = ST: Financial Modeling or 8823 Title = ST: DataAnalys-Continuous Imp or 8803 Title = ST: Valuation &amp; Value Creation ) or</td>
</tr>
<tr>
<td>Computational Data Analytics Track Electives</td>
<td>( 2 Classes in CSE 6140* or 6240 or 6250* or CS 6400* or 7450* or CSE 6740* or ISYE 6740* or CS 7541* additionally you need a minimum of 1 Classes from CSE 6740* or ISYE 6740* or CS 7641* )</td>
</tr>
</tbody>
</table>
Online Master of Science in Analytics

Registration
Course Load

- By default all OMS Analytics students are set at a maximum of six credit hours.
- Students can register for as little as one course per semester.
- After your first semester, you are not required to register every semester, meaning you can take time off.
  - If you are out for two consecutive semesters, not counting a semester where you have a “W” mark, you will need to complete a Readmission Form.
- Students have up to six-years from their first semester to complete the degree and graduation requirements.
- Keep in mind each OMS Analytics course is just as rigorous, challenging, and time-consuming (average 15 hours per week/course) as its on campus equivalent.
OSCAR and BuzzPort

Public portal to access schedule of class, course catalog, institute calendars

https://oscar.gatech.edu

BuzzPort is your student portal and gateway access to Oscar and DegreeWorks

Use OSCAR to:

▷ Search the Course Catalog
▷ View schedule of classes and find course CRNs
▷ View Financial Aid Information

Use Buzzport to:

▷ Access Oscar
▷ Register for Class
▷ Access DegreeWorks your Degree Audit

Registration (OSCAR)  DegreeWorks

Online Master of Science in Analytics
Registration

➤ Log into Buzzport, Oscar, Registration - or [https://buzzport.gatech.edu/](https://buzzport.gatech.edu/)
➤ Add CRNs to Worksheet (versus course name)

➤ OMS Analytics advises students to register as soon as they can to ensure they will secure a seat and have access to their course on day one.
Spring 2021 Course Offerings

If you need additional course information, here are the course descriptions and previews.

- **CS 6400**: Database Systems Concepts and Design
- **CS 6601**: Artificial Intelligence
- **CS 7642**: Reinforcement Learning
- **CS 7646**: Machine Learning for Trading
- **CSE 6040**: Computing for Data Analysis
- **CSE 6242**: Data & Visual Analytics
- **CSE 6250**: Big Data Analytics in Healthcare
- **ISYE 6402**: Time Series Analysis
- **ISYE 6414**: Regression Analysis
- **ISYE 6420**: Bayesian Statistics
- **ISYE 6501**: Introduction to Analytics Modeling
- **ISYE 6644**: Simulation
- **ISYE 6669**: Deterministic Optimization
- **ISYE 6740**: Computational Data Analysis
- **ISYE 7406**: Data Mining and Statistical Learning - NEW
- **ISYE 8803**: Topics on High-Dimensional Data Analytics
- **MGT 6203**: Data Analytics in Business
- **MGT 6311**: Digital Marketing
- **MGT 8803**: Business Fundamentals for Analytics
- **MGT 8813**: Financial Modeling
- **MGT 8823**: Data Analysis for Continuous Improvement
- **MGT 8833**: Privacy for Professionals
- **CSE/ISYE/MGT 6748**: Applied Analytics Practicum
Spring 2021 Registration – Phase I

- Time Tickets will be available on November 5, 2020
- Registration will open for Phase I on November 9, 2020
- If you are on the waitlist, it will be managed during Phase II – an email will be sent to your Georgia Tech student email and you have 12 hours to register or be dropped off the list
- Phase I closes at 4:00 p.m. EDT on December 11, 2020
- Phase II opens January 8th and closes at 4:00 PM EDT on January 22, 2021 (last day to "drop" a course without penalty)*
Online Master of Science in Analytics

Withdrawal Deadline: Withdrawal vs. Drop
Withdrawal Deadline: Drops vs. Withdrawals

Course Withdrawal Deadline is October 24 at 4 p.m. EDT

What’s the difference between a drop and a withdrawal?

**Drop**

- A drop can only occur during the add/drop period. After 4 p.m. on the Friday of the first week of class, the registration window closes, and the withdrawal window opens the following Tuesday.

- The add/drop period coincides with the registration “phases” Phase I and/or Phase II (specific dates are in the [academic calendar](#)).

- If you drop a course during that time, it won’t appear on your transcript.

- It also won’t be included on your final tuition bill. If you paid for a course in advance and drop it during the "add/drop" period, you’ll receive a refund.
Withdrawal Deadline: Drops vs. Withdrawals

**Withdrawal**

- A withdrawal occurs when you log into your student portal to remove yourself from a course after the add/drop period ends.

- When you withdraw from a course, a grade of “W” will appear on your transcript for that course; the “W” has no impact on your GPA or standing with the degree program.

- You can still register for the course in a future term as needed.

- If you’re registered for multiple courses but only withdraw from some, you won’t receive a refund.

- If you withdraw from all courses, Georgia Tech will prorate your refund, if you qualify for one.

- If you are a registered for 12 credit hours and you withdrawal from all courses, you will be required to complete a Petition to Faculty to return for the next semester.
How do I know if I should withdraw from a class?

- If you are struggling to manage and/or balance your time due to other obligations and your coursework is impacted.
- If you are currently struggling in a course (for example, if you are below a C letter grade) you may want to consider withdrawing from a course, as you would rather have a W than a D or a F on your transcript.
- If your academic standing is already probation and you are at risk of academic dismissal.
Online Master of Science in Analytics

Graduation
Graduation and Commencement

- Graduation is the action and Commencement is the event.
- All students must apply to Graduate – it is not an automatic process.
- Students can apply before their last semester or the first week into their final semester.
- Commencement is held two times per year: Spring and Fall, there is no Summer Commencement.
- Summer graduates by default participate in the Fall Commencement. To participate in Spring, you must apply for your actual term of graduation and complete a separate application to request permission from the Registrar's Office to "Early Walk." Depending on space, this application may not be approved.
Graduation and Commencement

- You can cancel your graduation application if needed or it will be cancelled for you if you do not meet the curriculum requirements to graduate for the term you applied.
- You can take additional courses before or after graduation. If you want to formally graduate and return, there are two forms you must complete. Tuition rates are currently the same.
- Your GPA will continue to calculate with any graduate level course you take before or after graduation even after your "degree requirements" are met.
- No, there is no option to audit courses after graduation under the OMS Analytics student status.
The President and Faculty of The Georgia Institute of Technology

To all to whom these presents may come, Greeting: Whereas

[Name redacted]

has completed all the requirements for Graduation, now, therefore, We, under the authority vested in us, do hereby confer the degree of

Master of Science in Analytics

with all the rights, privileges and honors, thereunto appertaining.

In witness whereof, the signatures of the Chancellor of the University System, the President and the Registrar of The Georgia Institute of Technology are hereto subscribed, and the seal of the Institute is affixed.

Given at Atlanta on the first day of August, two thousand and twenty.
Online Master of Science in Analytics

Q&A
Miscellaneous Questions

» Piazza is your email for a course, and you can privately message faculty with specific questions or requests

» Individual faculty will have to determine if they want to write a letter of recommendation on behalf of a student

» The OMS Analytics program is not a "Pre-PhD" program since it is not research driven. However, our curriculum is robust and may support an application for a program. It is up to the respective institution to determine your overall qualifications

» Graduate Admissions is still document matching transcripts received for all Fall 2020 students. You will be able to register for Spring. If they have a specific request, you will receive an email from their department