# MS in Data Science and Business Analytics
## Data Computing

MSDSBA students should utilize this course schedule in creating their Plan of Work. Please note that the course schedule is tentative and could change. Students are encouraged to discuss their Plan of Work with their advisor. Students beginning the fall term are encouraged to complete DSA 6000 and DSE 6000 in their first term.

| Course Schedule | | |
|---|---|---|
| **Fall Term** | **Winter Term** | **Spring/Summer Term** |
| Core Courses | Core Courses | Course Courses |
| DSA 6000: Data Science & Analytics<br>DSB 6000: Data Science Strategy & Leadership<br>DSE 6000: Computing Platforms for Data Science | DSA 6000: Data Science & Analytics<br>DSB 6000: Data Science Strategy & Leadership | N/A |
| Concentration Courses | Concentration Courses | Concentration Courses |
| CSC 5800: Intelligent Systems: Algorithms and Tools<br>CSC 5825: Introduction to Machine Learning & Apps<br>DSA 6200: Operations Research<br>DSE 6100: Data Modeling & Management | CSC 7810: Data Mining - Algorithms and Applications<br>CSC 7991: Special Topics - Intro to Deep Learning<br>DSA 6100: Statistical Methods for Data Science & Analytics<br>DSA 6300: Decision Analysis & Simulation<br>DSB 6100: Marketing Analytics<br>DSB 6200: Manufacturing & Supply Chain Analytics<br>DSE 6200: Modern Databases<br>DSE 6300: Data Science Applications Development<br>ISE 7860: Intelligent Analytics | N/A |
| Electives | Electives | Electives |
| Please refer to the list of qualified electives. Each course may or may not be offered this semester.<br><br>Elective List | Please refer to the list of qualified electives. Each course may or may not be offered this semester.<br><br>Elective List | Please refer to the list of qualified electives. Each course may or may not be offered this semester.<br><br>Elective List |
| Practicum | Practicum | Practicum |
| N/A | N/A | DSA 7500: Practicum<br>DSB 7500: Practicum<br>DSE 7500: Practicum |

WAYNE STATE
College of Engineering

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SCHOOL OF BUSINESS

| MS in Data Science and Business Analytics Data Computing | Contact: Rob Carlson, Graduate Program Coordinator, College of Engineering<br>E-Mail: rcarlson@wayne.edu    Phone: 313-577-9615<br>**\*Questions regarding course selection or exceptions should be directed to Dr. Ming Dong** |
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## CURRICULUM REQUIRMENTS

The Master of Science in Data Science and Business Analytics program requires completion of 30 credit hours: 9 credits in Core Courses, 9 credits in Concentration Courses, 6 credits in Elective Courses, and 6 credits in the Practicum Course.

Students may choose elective courses from the approved elective list or from the concentration courses in another track.  Courses outside these options must be approved by the Concentration Director.  Departmental approval is required to enroll in the practicum course in the Spring/Summer term.

## PRE-REQUISITE COURSES (if required)

| Course | Title | Term |
|---|---|---|
| DSE 5070 | Intro: Data Computing & Programming* | _____ |

*Students may also take equivalent Coursera courses.

## CORE COURSES (9 CREDITS)

| Course | Title | Term |
|---|---|---|
| DSA 6000 | Data Science & Analytics | _____ |
| DSB 6000 | Data Science Strategy & Leadership | _____ |
| DSE 6000 | Computing Platforms for Data Science | _____ |

## CONCENTRATION COURSES (9 CREDITS) - Choose Three

| Course | Title | Term |
|---|---|---|
| DSE 6100 | Data Modeling and Management | _____ |
| DSE 6200 | Modern Databases | _____ |
| DSE 6300 | Data Science Applications and Development | _____ |

## PRACTICUM COURSE (6 CREDITS)

| Course | Title | Term |
|---|---|---|
| DSE 7500 | Practicum*** | _____ |

***Core and concentration courses must be completed.

<span style="color:red">Prior to completion of 12 credit hours of graduate coursework, you are <u>required</u> to submit a Plan of Work (through Degree Works) to your advisor for approval. If you do not, a registration hold will be placed on your account.  Please notify your advisor by email when you have submitted a Plan of Work.</span>

## ELECTIVE COURSES (6 CREDITS)

| Course | Title | Term |
|---|---|---|
| ACC 7148 | ERP Systems and Business Integration (3 credits) | _____ |
| ACC 7280 | Accounting Data Analytics (3 credits) | _____ |
| ACC 7290 | Blockchain: An Accounting and Business Perspective (3 credits) | _____ |
| CSC 5050 | Algorithms and Data Structures (4 credits) | _____ |
| CSC 5250 | Network, Distributed, and Concurrent Programming (3 credits) | _____ |
| CSC 6800 | Artificial Intelligence I (3 credits) | _____ |
| CSC 6860 | Digital Image Processing and Analysis (3 credits) | _____ |
| CSC 7220 | Parallel Computing II: Algorithms and Applications (4 credits) | _____ |
| CSC 7300 | Bioinformatics I: Biological Databases and Data Analysis (3 credits)**** | _____ |
| CSC 7301 | Bioinformatics I: Programming Lab (4 credits)**** | _____ |

**** In order to receive elective credit for Bioinformatics I, you must take CSC 7300 and CSC 7301.

| Course | Title | Term |
|---|---|---|
| CSC 7260 | Distributed Systems (3 credits) | _____ |
| CSC 7825 | Machine Learning (3 credits) | _____ |
| ECE 7610 | Advanced Parallel and Distributed Systems (4 credits) | _____ |
| ECO 7100 | Econometrics I (4 credits) | _____ |
| ECO 7110 | Econometrics II (4 credits) | _____ |
| ECO 7120 | Econometrics III (4 credits) | _____ |
| IE 7325 | Supply Chain Management (4 credits) | _____ |
| IE 7720 | Engineering Risk and Decision Analysis (4 credits) | _____ |
| IE 7860 | Intelligent Analytics (3 credits) | _____ |
| ISM 7505 | Information Analytics (3 credits) | _____ |
| ISM 7512 | Digital Video Creation and Analytics (3 credits) | _____ |
| ISM 7570 | Business Analytics (3 credits) | _____ |
| ISM 7994 | Digital Content Development (3 credits) | |
| ISM 7996 | Principles for Customer Relationship Management (3 credits) | |
| STA 5830 | Applied Time Series (3 credits) | |
| STA 6840 | Linear Statistical Models (3 credits) | |

Students must meet the pre-requisite requirements for elective courses.

Pre-requisite waiver requests must be approved by the course instructor.

# Degree Works
# Plan of Work Instructions
Step by Step Instructions:

1. Log into Degree Works (www.degreeworks.wayne.edu) with your access ID.
2. Create a new plan, as shown in the video.  The title of the plan should be *<NAME> - MSDSBA Plan of Work, <DATE SUBMITTED>*.  For example, *John Smith - MSDSBA Plan of Work, 1/10/2021*
3. Select your planned courses for each semester.  If you are not sure which classes you want to take, just select some for now; you may always change it later.  Please ensure that the courses you choose meet the degree requirements, which can be found at https://engineering.wayne.edu/data-analytics/curriculum/index.php.
4. Save the plan by clicking save on the bottom right corner.
5. Send us an e-mail and mention that your plan of work is ready for approval. We will assist in getting the plan of work approved.
6. If you need a printed copy of your plan of work for CPT or other reasons, you may print the plan in the Notes view.
7. You will not be able to make changes once the plan of work has been approved.  If you expect changes in your course plan, please submit a new plan of work or e-mail the Graduate Program Coordinator for assistance.

**How do I use Degree Works?**

A helpful guide can be found at the link below.

https://wayne.edu/degreeworks/studenthowto/degree_works_academic_plan_students.pdf

Video Tutorial – The video link below is specific to the Electrical and Computer Engineering Department programs, but is a helpful resource for "how to."

https://youtu.be/HX-hJ_d9v3w

**Where can I get more information on Degree Works?**

- https://wayne.edu/degreeworks/student-info/
- https://wayne.edu/degreeworks/student-faq/