

MS in Data Science and Business Analytics Advanced Analytics

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

MS in Data Science and Business Analytics Advanced Analytics			Contact: Rob Carlson, Graduate Program Coordinator, College of Engineering E-Mail: rcarlson@wayne.edu Phone: 313-577-9615 *Questions regarding course selection or exceptions should be directed to Dr. Ratna Babu Chinnam		
CURRICULUM REQUIRMENTS			ELECTIVE COURSES (6 CREDITS)		
<p>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.</p> <p>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.</p>			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.		
PRE-REQUISITE COURSES (if required)			CSC 7260	Distributed Systems (3 credits)	_____
Course	Title	Term	CSC 7825	Machine Learning (3 credits)	_____
DSE 5070	Intro: Data Computing & Programming*	_____	ECE 7610	Advanced Parallel and Distributed Systems (4 credits)	_____
*Students may also take equivalent Coursera courses.			ECO 7100	Econometrics I (4 credits)	_____
CORE COURSES (9 CREDITS)			ECO 7110	Econometrics II (4 credits)	_____
Course	Title	Term	ECO 7120	Econometrics III (4 credits)	_____
DSA 6000	Data Science & Analytics	_____	IE 7325	Supply Chain Management (4 credits)	_____
DSB 6000	Data Science Strategy & Leadership	_____	IE 7720	Engineering Risk and Decision Analysis (4 credits)	_____
DSE 6000	Computing Platforms for Data Science	_____	IE 7860	Intelligent Analytics (3 credits)	_____
CONCENTRATION COURSES (9 CREDITS) - Choose Three			ISM 7505	Information Analytics (3 credits)	_____
Course	Title	Term	ISM 7512	Digital Video Creation and Analytics (3 credits)	_____
Required (choose two)			ISM 7570	Business Analytics (3 credits)	_____
CSC 5825	Introduction to Machine Learning & Apps**	_____	ISM 7994	Digital Content Development (3 credits)	_____
**Students with technical backgrounds should consider taking CSC 7825.			ISM 7996	Principles for Customer Relationship Management (3 credits)	_____
CSC 7760	Deep Learning	_____	STA 5830	Applied Time Series (3 credits)	_____
CSC 7810	Data Mining: Algorithms & Applications	_____	STA 6840	Linear Statistical Models (3 credits)	_____
ISE 7860	Intelligent Analytics	_____			
Required (choose one)					
DSA 6100	Statistical Methods for Data Science & Analytics	_____			
DSA 6200	Operations Research	_____			
DSA 6300	Decision Analysis & Simulation	_____			
PRACTICUM COURSE (6 CREDITS)			NOTE: Advanced Analytics students should strongly consider taking an elective from the second set of required concentration courses.		
Course	Title	Term	Students must meet the pre-requisite requirements for elective courses.		
DSA 7500	Practicum***	_____	Pre-requisite waiver requests must be approved by the course instructor.		
***Core and concentration courses must be completed.					

Prior to completion of 12 credit hours of graduate coursework, you are **required** 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.

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/>