						Fall 2	019 Start						
				One Co	urse per Moi		in the summe	r - 13 terms -	sample 1				
	This schedu	le has no classes	in the summ	er due to prerequisi						econd half of Mile	stone II and Netw	ork Analysis)	
UMSI MADS	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall
Program	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10	Semester 11	Semester 12	Semester 13
	Data Manipulation	Being a Data Scientist	_	SQL & Databases	Milestone I	_	Supervised learning	Causal Inference	_		Network Analysis	_	Experiment Designand Analysis
	-	-	-	-	-	-	-	-	_	-	Milestone II	-	-
Month 1	-	-	-	-	-	-	-	-	-	-	-	-	-
	Math Methods for Data Science	Information Visualization I	-	Efficient Data Processing	Data Mining II	-	Unsupervised Learning	Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	-	Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	-	Learning Analytic
	-	-	-	-	-	-	-	-	-	-	-	-	-
Month 2	-	-	-	-	-	-	-	-	-	-	-	-	-
	Visual Exploration of Data	Data Science Ethics	-	Big Data: Scalable Data Processing	-	-	Deep Learning OR Machine Learning Pipelines	Deep Learning OR Machine Learning Pipelines	-	Information Retrieval	Social Media Analytics	-	Capstone
	-	-	-	-	-	-	-	-	-	-	-	-	-
Month 3	-	-	-	-	-	-	-	-	-	-	-	-	-
	Data Mining I	Communicating Data Science Results	-	Milestone I	Presenting Uncertainty	-	Applied Natural Language Processing	-	-	Milestone II	-	-	Capstone
	-	-	-	-	-	-	-	-	-	-	-	-	Capstone
Month 4	-	-	-	-	-	-	-	-	-	-	-	-	-
umber of Credits	4	4	0	4	3	0	4	3	0	3	4	0	5
				s no classes in the	summer due to	prerequisites. TI		ances where you	will have to take		once.		
UMSI MADS	Fall	Winter	Spring/Summer	as no classes in the	summer due to	prerequisites. TI Spring/Summer	here are zero inst	ances where you	will have to take Spring/Summer	Fall	Winter	Spring/Summer	Fall
UMSI MADS Program	Fall Semester 1			s no classes in the	summer due to	prerequisites. TI	here are zero inst	ances where you	will have to take			Spring/Summer Semester 12	Semester 13
	-	Winter	Spring/Summer	as no classes in the	summer due to	prerequisites. TI Spring/Summer	here are zero inst	Winter Semester 8	will have to take Spring/Summer	Fall	Winter		Semester 13 Experiment Desig
	Semester 1	Winter Semester 2	Spring/Summer	Fall Semester 4	Summer due to Winter Semester 5	prerequisites. TI Spring/Summer	Fall Semester 7	ances where you	will have to take Spring/Summer	Fall Semester 10	Winter Semester 11		Semester 13
	Semester 1 Data Manipulation	Winter Semester 2 Being a Data Scientist	Spring/Summer Semester 3	Fall Semester 4 SQL & Databases	summer due to Winter Semester 5 Milestone I	prerequisites. TI Spring/Summer Semester 6	Fall Semester 7 Supervised learning	Winter Semester 8 Causal Inference	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis	Winter Semester 11 Milestone II	Semester 12	Semester 13 Experiment Desig and Analysis
Program	Semester 1 Data Manipulation - - Math Methods for Data Science	Winter Semester 2 Being a Data Scientist Information Visualization I	Spring/Summer Semester 3	s no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing	summer due to Winter Semester 5 Milestone I Data Mining II	prerequisites. Ti Spring/Summer Semester 6	Fall Semester 7 Supervised learning Unsupervised Learning	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Winter Semester 11 Milestone II	Semester 12	Semester 13 Experiment Desig and Analysis - Learning Analytic
Program Month 1	Semester 1 Data Manipulation - - Math Methods for Data Science	Winter Semester 2 Being a Data Scientist Information Visualization I	Spring/Summer Semester 3	s no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing	Summer due to Winter Semester 5 Milestone I Data Mining II	prerequisites. Ti Spring/Summer Semester 6	Fall Semester 7 Supervised learning	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Winter Semester 11 Milestone II - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Semester 12	Semester 13 Experiment Desig and Analysis - Learning Analytic
Program	Semester 1 Data Manipulation - - Math Methods for Data Science	Winter Semester 2 Being a Data Scientist Information Visualization I	Spring/Summer Semester 3	s no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing	summer due to Winter Semester 5 Milestone I Data Mining II	prerequisites. Ti Spring/Summer Semester 6	Pere are zero inst Fall Semester 7 Supervised learning	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies -	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Winter Semester 11 Milestone II	Semester 12	Semester 13 Experiment Desig and Analysis Learning Analytic
Program Month 1	Semester 1 Data Manipulation Math Methods for Data Science Visual Exploration of Data	Winter Semester 2 Being a Data Scientist Information Visualization I	Spring/Summer Semester 3	s no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing	Summer due to Winter Semester 5 Milestone I Data Mining II	prerequisites. Ti Spring/Summer Semester 6	Fall Semester 7 Supervised learning	Ances where you Winter Semester 8 Causal Inference	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Winter Semester 11 Milestone II - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies	Semester 12	Semester 13 Experiment Designed Analysis
Month 1 Month 2	Semester 1 Data Manipulation Math Methods for Data Science Visual Exploration of Data -	Winter Semester 2 Being a Data Scientist Information Visualization I Data Science Ethics	Spring/Summer Semester 3	as no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing Big Data: Scalable Data Processing Big Data: Scalable Data Processing	summer due to Winter Semester 5 Milestone I Data Mining II	prerequisites. Ti Spring/Summer Semester 6	Pere are zero inst Fall Semester 7 Supervised learning	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Deep Learning OR Machine Learning Pipelines	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Information Retrieval	Winter Semester 11 Milestone II Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies Social Media Analytics	Semester 12	Semester 13 Experiment Designer and Analysis - Learning Analytic - Capstone -
Program Month 1	Semester 1 Data Manipulation Math Methods for Data Science Visual Exploration of Data	Winter Semester 2 Being a Data Scientist Information Visualization I Data Science Ethics	Spring/Summer Semester 3	as no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing Big Data: Scalable Data Processing	summer due to Winter Semester 5 Milestone I	prerequisites. Ti Spring/Summer Semester 6	Fall Semester 7 Supervised learning	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Deep Learning OR Machine Learning Pipelines - Applied Natural	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Information Retrieval	Winter Semester 11 Milestone II - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Social Media Analytics	Semester 12	Semester 13 Experiment Desig and Analysis - Learning Analytic - Capstone
Month 1 Month 2	Semester 1 Data Manipulation Math Methods for Data Science Visual Exploration of Data -	Winter Semester 2 Being a Data Scientist Information Visualization I Data Science Ethics	Spring/Summer Semester 3	as no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing Big Data: Scalable Data Processing Big Data: Scalable Data Processing	summer due to Winter Semester 5 Milestone I Data Mining II	prerequisites. Ti Spring/Summer Semester 6	Fall Semester 7 Supervised learning	Ances where you Winter Semester 8 Causal Inference Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Deep Learning OR Machine Learning Pipelines	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Information Retrieval	Winter Semester 11 Milestone II Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies Social Media Analytics	Semester 12	Semester 13 Experiment Desig and Analysis - Learning Analytic - Capstone - Capstone
Month 1 Month 2 Month 3	Semester 1 Data Manipulation Math Methods for Data Science Visual Exploration of Data Data Mining I	Winter Semester 2 Being a Data Scientist Information Visualization I Data Science Ethics Communicating Data Science Results	Spring/Summer Semester 3	as no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing Big Data: Scalable Data Processing Millestone I	Summer due to Winter Semester 5 Milestone I	prerequisites. TI Spring/Summer Semester 6	Pere are zero inst Fall Semester 7 Supervised learning Unsupervised Learning Deep Learning OR Machine Learning Pipelines Applied Natural Language Processing OR None -	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies Deep Learning OR Machine Learning Pipelines - Applied Natural Language Processing OR None -	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis	Winter Semester 11 Milestone II - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies Social Media Analytics	Semester 12	Semester 13 Experiment Desig and Analysis - Learning Analytic - Capstone - Capstone Capstone Capstone Capstone
Month 1 Month 2	Semester 1 Data Manipulation Math Methods for Data Science Visual Exploration of Data	Winter Semester 2 Being a Data Scientist Information Visualization I Data Science Ethics Communicating Data	Spring/Summer Semester 3	as no classes in the Fall Semester 4 SQL & Databases Efficient Data Processing Big Data: Scalable Data Processing	summer due to Winter Semester 5 Milestone I	prerequisites. Ti Spring/Summer Semester 6	Pere are zero inst Fall Semester 7 Supervised learning Deep Learning OR Machine Learning Pipelines Applied Natural Language Processing OR None	Ances where you Winter Semester 8 Causal Inference - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies Deep Learning OR Machine Learning Pipelines - Applied Natural Language Processing	will have to take Spring/Summer Semester 9	Fall Semester 10 Network Analysis - Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Information Retrieval	Winter Semester 11 Milestone II Qualitative Inquiry for Data Scientists OR Information Visualization II OR Database Architectures and Technolgies - Social Media Analytics	Semester 12	Semester 13 Experiment Desig and Analysis - Learning Analytic - Capstone - Capstone

			0: 0-		. In an a long to a		44 t				
			One Co	urse per Month	ı - breaks in r	nost summe	rs - 11 terms	- sample 1			
	Thi	is schedule has t	hree classes	in the summer total	. There is one in:	stance where yo	u will have to take	e two courses at	once (Winter 20	23).	
UMSI MADS	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter
Program	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10	Semester 11
	Data Manipulation	Being a Data Scientist	SQL & Databases	Supervised learning	Milestone I	_	Causal Inference	Network Analysis	_	Milestone II	Experiment Design and Analysis
	-	-	-		-	-	-	-	_	-	- und / undrysis
Month 1	-	-	-	-	-	-	-	-	-	-	-
										Qualitative Inquiry for Data Scientists OR Database	Qualitative Inquiry for Data Scientists OR Database
	Math Methods for Data Science	Information Visualization I	-	Efficient Data Processing	Data Mining II	-	Unsupervised Learning	Information Visualization II	-	Architectures and Technolgies	Architectures and Technolgies
	-	-	-	-	-	-	-	-	-	-	Learning Analytics
Month 2	-	-	- Dia Data	-	-	-	-	-	-	-	-
	Visual Exploration of Data	Data Science Ethics	Big Data: Scalable Data Processing	Big Data: Scalable Data Processing	Deep Learning	-	Machine Learning Pipelines	Information Retrieval	-	Social Media Analytics	Capstone
	-	-	-	-	-	-	-	-	-	-	-
Month 3	-	-	-	-	-	-	- Applied Natural	- Applied Netural	-	-	-
	Data Mining I	Communicating Data Science Results	-	Milestone I	Presenting Uncertainty	-	Applied Natural Language Processing OR None	Applied Natural Language Processing OR None	Milestone II	-	Capstone
	-	-	-	-	-	-	-	-	-	-	Capstone
Month 4	-	-	-		-		-	-	-	-	-
lumber of Credits	4	4	2	4	4	0	3 - 4	3 - 4	1	3	6
	This	sample schedule		rse per Month -					s at once (Fall 2	2022).	
UMSI MADS	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter
Program	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10	Semester 11
	Data Manipulation	Being a Data Scientist	SQL & Databases	Supervised learning	Milestone I	-	Causal Inference	Network Analysis	Milestone II	Experiment Design and Analysis	-
	-	-	-	-	-	-	-	-	-	-	-
Month 1	- Math Methods for Data Science	- Information Visualization I	-	- Efficient Data Processing	- Data Mining II	-	- Unsupervised Learning	- Information Visualization II	-	Qualitative Inquiry for Data Scientists	- Learning Analytics
	-	-	-	-	-	-	-	-	-	Database Architectures and Technolgies	-
Month 2	-	-	-	-	-	-	-	-	-	-	-
	Visual Exploration of Data	Data Science Ethics	-	Big Data: Scalable Data Processing	Deep Learning	-	Machine Learning Pipelines	Information Retrieval	- -	Social Media Analytics	Capstone
Month 3	-	-	-	-	-	-	-	-	-	-	-
	Data Mining I	Communicating Data Science Results	-	Milestone I	Presenting Uncertainty	-	Applied Natural Language Processing	Milestone II	-	-	Capstone
	-	-	-	-	-	-	-	-	-	-	Capstone
Month 4	-	-	-	-	-	-	-	-	-	-	-
Number of Credits	4	4	1	4	4	0	4	4	1	4	4

MADS Schedule Options

			One Cour	se per Month -	reduced load	d most sumn	ners - 11 term	s - sample 3				
This sam	ple schedule has			otal. There are four i				•	20. Fall 2021. W	inter 2022, and F	all 2022).	
UMSI MADS	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter	Spring/Summer	Fall	Winter	
Program	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10	Semester 11	
	Data Manipulation	Being a Data Scientist	-	Supervised learning	Milestone I	-	Causal Inference	Network Analysis	-	Experiment Design and Analysis	-	
	-	-	-	SQL & Databases	-	-	-	Milestone II	-	-	-	
Month 1	-	-	-	-	-	-	-	-	-	-	-	
	Math Methods for Data Science	Information Visualization I	-	Efficient Data Processing	Data Mining II	-	Unsupervised Learning	Information Visualization II	-	Qualitative Inquiry for Data Scientists	Learning Analytics	
	-	-	-	-	-	-	-	-	-	Database Architectures and Technolgies	-	
Month 2	-	-	-	-	-	-	-	-	-	-	-	
	Visual Exploration of Data	Data Science Ethics	-	Big Data: Scalable Data Processing	Deep Learning	-	Machine Learning Pipelines	Information Retrieval	-	Social Media Analytics	Capstone	
	-	-	-	-	-	-	-	-	-	-	-	
Month 3	-	-	-	-	-	-	-	-	-	-	-	
	Data Mining I	Communicating Data Science Results	-	Milestone I	Presenting Uncertainty	-	Applied Natural Language Processing	-	-	-	Capstone	
	-	-	-	-	-	-	Milestone II	-	-	-	Capstone	
Month 4	-	-	-	-	-	-	-	-	-	-	-	
Number of Credits	4	4	0	5	4	0	5	4	0	4	4	