

Data Engineering						
Matriculation Fall 2019						
Module Component No.	Status	Assessment type	Period	Semester	CP	
First Semester						30
Core Area						10
MCO003-051003	The Big Data Challenge	m	Term paper (Project report)	During the semester	1	5
MCO011-340131	Data Analytics	m	Written examination	Examination period	1	5
Elective Area						5
	<i>Students choose one module from those listed below</i>	me	See below	See below	1-3	
Methods Area						5
	<i>Students choose one module from those listed below</i>	me	See below	See below	1-3	
Discovery Area						5
MRD004-340222	Current Topics in Data Engineering	m	Poster Presentation	During the semester	1	5
Career Area						5

MCA002	Language Skills - Part I	m	Written examination	Examination period	1	2.5
MCA006-051464	Communication and Presentation Skills for Executives	m	Oral Presentation	During the semester	1	2.5
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Career Area						2.5
MCA005-340121	Career Skills for Data Engineers Part I (Legal Foundations of Data Engineering)	m	Oral Presentation	Examination period	1 or 3	2.5
Second Semester						30
Core Area						10
MCO012-340151	Big Databases and Cloud Services	m	Written examination	Examination period	2	5
MCO013-320372	Machine Learning	m	Written examination	Examination period	2	5
Elective Area						5
	<i>Students choose one module from those listed below</i>	me	See below	See below	1-3	
Module Component No.		Status ₁	Assessment type	Examination period ²	Semester	Credits
Methods Area						5

	<i>Students choose one module from those listed below</i>	me	See below	See below	1-3	
Discovery Area						5
MRD005-340001	Data Engineering Advanced Project I	m	Term paper (Project report)	flexible	2	
Career Area						2.5
MCA005-340251	Career Skills for Data Engineers Part II (Data Security and Privacy)	m	Written examination	During the semester	2	2.5
Third Semester						30
Core Area						10
MCO014-340231	Data Visualization and Image Processing	m	Written examination	Examination period	3	5
MCO015-340112	Data Acquisition Technologies and Sensor Networks	m	Term paper (Project report)	During the semester	1-3	5
Elective Area						5
	<i>Students choose one module from those listed below</i>	me	See below	See below	1-3	
Methods Area						5
	<i>Students choose one module from those listed below</i>	me	See below	See below	1-3	
Discovery Area						5

MRD006-340002	Data Engineering Advanced Project II	m	Term paper (Project report)	flexible	3	5
Career Area						5
MCA002	Language Skills Part II	m	Written examination	Examination period	3	2.5
MCA 007	Ethics & Sustainable Business	m	Term paper (Project report)	During the semester	3	2.5
Fourth Semester						30
MMT003-340003	Master Thesis	m	Written Thesis + Oral defense	Individually	4	30
Total CP						120

¹ Status (m = mandatory, me = mandatory elective)

List of all possible modules within the Elective and Methods Area						
Module Component No.	Status	Assessment type	Period	Semester	Credits	
Elective Area <i>students choose 3 modules during their 3 semesters</i>						15

MECS001-340101	Principles of Statistical Modeling	me	Written examination	Examination period	2	5
MECS002-340212	Network Theory	me	Written examination	Examination period	1 or 3	5
MECS003-340143	Data Compression, Compressive Sensing and Modern Coding	me	Written examination	Examination period	1 or 3	5
MEGI001-210213	Geoinformatics	me	Term paper	During the semester	1 or 3	5
MEGI002-210001	Geo Informatics Lab	me	Term paper	During the semester	2	5
MEBI001-550432	Introduction to Systems Biology	me	Written examination	Examination period	2	5
MEBI003-550453	Modeling and Analysis of Complex Systems	me	Written examination	Examination period	1 or 3	5
MEBI004-530681 MEBI004-530481	Models of Biological Processes	me	Oral presentation	During the semester	1 or 3	5
MESCO01-340122	Data Mining	me	Term paper (Project report)	During the semester	2	5
MCO008-051008	Data Analytics in Supply Chain Management	me	Term paper (Project report)	During the semester	3	5
Methods <i>Students choose 3 modules during their 3 semesters</i>						15

MMM004-340103	Modeling and Control of Dynamical Systems	me	Written examination	Examination period	1 or 3	5
MMM005-340153	Modern Signal Processing	me	Oral presentation	During the semester	2	5
MMM006-340161	Web Analytics	me	Term paper	During the semester	1 or 3	5
MMM007-550443	Network Approaches in Biology and Medicine	me	Oral presentation	During the semester	1 or 3	5
MMM008-110231	Applied Dynamical Systems	me	Term paper (Project Portfolio)	During the semester	2	5
	Remedials:					
MMM009-340181	Calculus and Linear Algebra for Graduate Students	me	Written examination	Examination period	1	5
MMM010	Computational Methods for Data Engineering	me	Written examination	During the semester	1	5
MMM011-340171	Probabilities for Graduate Students	me	Written examination	Examination period	1	5