

Master of Engineering in Industrial Engineering and Systems Management  
Degree Requirements (Data Analytics – DA)  
(45 Credits + 1 Credit Environmental Requirement\*)

\* All courses are 3 credits unless otherwise noted

CORE	DA Concentration Electives	Electives
all are required		
<p>IESM315 Engineering Economics  <b>IESM 321 Operations Research 2</b>  <b>IESM 301 Analysis and Design of Data Systems</b>            IESM 311 Quality Assurance and Management            IESM 330 Simulation of IE Systems            IESM 331 Production System Analysis</p> <p>IESM 395 Capstone Preparation  <i>(2nd year standing)</i>            IESM 396 Capstone Thesis – 4 credits            or IESM 397 Capstone Project <i>(2nd year standing)</i> – 1 credit</p> <p>ENV***- 1 credit env. requirement</p>	<p><b>IESM324 Applied Statistics for Engineers</b>  <b>CS340 Machine Learning</b>  <b>CS343 Data Visualization</b></p> <p>IESM313 Data Mining &amp; Predictive Analytics            DS330 Deep Learning            CS346 Artificial Intelligence            CS362 Time Series Analysis            DS### Bayesian Statistics            CS342 Data Science            CS345 Bioinformatics            Decision Analysis</p>	<p>IESM311 Quality Assurance &amp; Management            IESM372 Portfolio Theory            IESM360 CAD            IESM361 CAM            IESM345 Supply Chain Management            IESM347 Design and Innovation of Information Services</p> <p>CS319 Computer Vision            CS355 Entrepreneurship            CS371 Image Processing            CS315 Cryptography            CS337 Cybersecurity            CS350 Software Project Management</p> <p>Big Data and Cloud Computing            Data Structures            Design and Analysis of Experiments</p>
	<b>Preparatory Courses</b>	
	<p>IESM106 Probability &amp; Statistics            CS111 Programming for Data Science            IESM 220 Operations Research 1</p>	