

## Course Descriptions Bachelor 2023-2024

Course Title	Statistics							
Course Code	EBC1044							
ECTS Credits	6,5							
Assessment	Whole/Half Grades							
Period	Period	Start	End	Mon	Tue	Wed	Thu	Fri
	2	30-10-2023	15-12-2023					
Level	Introductory							
Coordinator	Dirk Tempelaar For more information:d.tempelaar@maastrichtuniversity.nl							
Language of instruction	English							
Goals	<ul style="list-style-type: none"><li>* Understanding of main statistical concepts and methods that shape descriptive statistics, probability models, sampling and inferential statistics.</li><li>* Apply main statistical concepts and methods that shape descriptive statistics, probability models, sampling and inferential statistics.</li><li>* Being able to reason what statistical concepts and methods match business analytics cases.</li><li>* Judging about the correctness of applying statistical concepts and methods in business analytics cases.</li><li>* Reflect on the choice for methods and their application in business analytics cases.</li></ul>							
Description	<p>In our course, we will focus on the following topics:</p> <ul style="list-style-type: none"><li>* Methods of data collection, and types of data.</li><li>* Descriptive statistics: describing important characteristics of populations or samples by numerical methods as the mean, median, mode (measures of central tendency), variance and standard deviation (measures of spread) as well as by graphical methods, like histograms, bar charts or Box-and-Whiskers displays.</li><li>* Probability theory, as an introduction to random variables.</li><li>* Discrete random variables and the most important discrete probability distribution: the binomial distribution; continuous random variables and two continuous probability distributions: the uniform and the normal distribution.</li><li>* Sampling theory, as the foundation of inferential statistics, or inductive reasoning.</li><li>* The construction of confidence intervals to estimate unknown population parameters.</li><li>* Hypothesis testing for both the proportion and means cases.</li><li>* Regressions analysis and ANOVA: the investigation of relationships.</li></ul>							
Literature	OpenIntro Statistics, 4th Edition, 2019, by David Diez, Çetinkaya-Rundel, Christopher D. Barr ( <a href="https://www.openintro.org/stat/textbook.php?stat_book=os">https://www.openintro.org/stat/textbook.php?stat_book=os</a> ) MyOpenMath digital learning environment ( <a href="http://www.myopenmath.com">www.myopenmath.com</a> )							
Prerequisites	<p>This course is in transition.</p> <p>The following rule applies to bachelor Business Analytics students who started the programme prior to academic year 2022/23. <b>TRANSITIONAL REGULATION (EBC1044):</b> Students who started their Bachelor's study programme Business Analytics in or prior to September 2021 and did not successfully complete Mathematical Analysis (EBC1043) and/or Statistics (EBC1044) before September 2023 have an exam only option to pass the course(s) in academic year 2023-2024.</p> <p>See the Transitional Regulations section in the Bachelor Education and Examination Regulations for more information.</p>							
Keywords								
Teaching methods	PBL / Assignment / Papers							
Assessment methods	Final Paper / Assignment / Take home exam							
Evaluation in previous academic year	For the complete evaluation of this course please click <a href="http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM">http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM</a>							
This course belongs to the following programme / specialisation	Transitional Regulations			See prerequisites				