

## Course Descriptions Exchange 2023-2024

Course Title Sampling Design  
 Course Code EBS2037  
 ECTS Credits 4,0  
 Assessment Whole/Half Grades

Period	Period	Start	End	Mon	Tue	Wed	Thu	Fri
6	24-6-2024	5-7-2024	C					

Level Introductory

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Language of instruction English

Goals  
 -Understand why designs like stratified sampling are often more informative than simple random sampling.  
 -Learn to recognize the opportunities to apply more advanced sampling designs in practical situations.  
 -Learn to implement different sampling designs, and process their outcomes.

Description  
 Marketing researchers often draw samples in order to infer the opinions of a client population. This is very practical, but since only a small part of the population is observed, the results are subject to inaccuracy. Of course, we want the sample results to be as close as possible to the true values. The most straightforward way to draw a sample is simple random sampling, where every population member has the same chance of being sampled. However, sometimes more complex sampling designs (e.g. stratified samples) are much better. "Better" in the sense of value-for-money: they allow us to make more accurate statements at the same cost, or to reach a desired level of accuracy at lower cost, than simple random sampling. This course focuses on the statistical aspects of various sampling designs. The objective is to construct appropriate sampling designs in real life situations. During the first half of the course, some theory is introduced, and tested by small numerical assignments. During the second half, a sampling design is developed for a practical situation and the actual sampling is conducted. The samples are drawn from a given data set which serves as population: the course does not involve the construction of a questionnaire and the actual gathering of data.

Literature  
 A translated and adapted version of Theorie en Praktijk van het Steekproefonderzoek by J.G. Bethlehem, 1st ed., CBS, Voorburg (to be made available through Canvas ).

Prerequisites  
 Basic principles from inferential statistics as discussed in typical first-year Quantitative Methods courses such as QM1 (code EBC1005/1006/1007) and QM2 (code EBC1033/1034/1035): basic probability theory, population versus sample, sampling distribution, point estimation, confidence intervals, type I error, regression analysis.  
 An advanced level of English.

Teaching methods PBL / Assignment / Groupwork

Assessment methods Attendance / Participation

Evaluation in previous academic year  
 For the complete evaluation of this course please click <http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM>

This course belongs to the following programme / specialisation

Bachelor Economics and Business Economics - Economics	Year 2 Elective Skill(s)
Bachelor Economics and Business Economics - Economics and Management of Information	Year 2 Elective Skill(s)
Bachelor Economics and Business Economics - International Business Economics	Year 2 Elective Skill(s)
Bachelor Fiscal Economics	Year 2 Elective Skill(s)
Bachelor International Business	Year 2 Elective Skill(s)
SBE Exchange Bachelor	Bachelor Exchange Skills
SBE Exchange Master	Bachelor Exchange Skills
SBE Non Degree Courses	Bachelor Skills