

## Course Descriptions Bachelor 2018-2019

Course Title Introduction to Software in Econometrics, Operations Research and Actuarial Science  
 Course Code EBS2043  
 ECTS Credits 4,0  
 Assessment Whole/Half Grades

| Period | Start     | End       | Mon | Tue | Wed | Thu | Fri |
|--------|-----------|-----------|-----|-----|-----|-----|-----|
| 3      | 14-1-2019 | 25-1-2019 | C   |     |     |     |     |

Level Advanced  
 Coordinator Nalan Bastürk For more information: [n.basturk@maastrichtuniversity.nl](mailto:n.basturk@maastrichtuniversity.nl)  
 Language of instruction English  
 Goals Development of software skills for Econometrics and Operations Research methods.  
 Description In this skills course students will acquire the necessary skills in order to use computer software to solve problems in Econometrics & Operations Research. These skills are needed for many Bachelor thesis topics. Students can choose to work on either the Econometrics or the Operations Research part.

Econometrics part:  
 Students will be trained to use the software R. Applications using the software R will be based on Bayesian inference of a set of standard econometric models. Special attention will be given to the development of computational algorithms such as Markov chain Monte Carlo.

Operations Research part:  
 Students will acquire the skills to model optimization problems as (integer) linear programs and to solve such programs using the software package CPLEX as a Java library. Being able to model business and economics problems as linear programs and being able to solve them efficiently is essential in business and research.

Literature Lecture notes.  
 Prerequisites Optimisation (EBC2105), Operations Research (EBC2106), Econometric Methods 1 (EBC2111).  
 Teaching methods Lecture / Assignment / Papers / Groupwork  
 Assessment methods Final Paper  
 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 Econometrics and Operations Research Year 3 Compulsory Skills