

## Course Descriptions None 2022-2023

| Course Title                         | Decision Support Systems and Business Modelling   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
|--------------------------------------|---|----------|-------|-----|-----|-----|-----|-----|-----|---|-----------|----------|--|---|--|--|---|
| Course Code                          | EBC2088   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| ECTS Credits                         | 6,5   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Assessment                           | Whole/Half Grades   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Period                               | <table><thead><tr><th>Period</th><th>Start</th><th>End</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th></tr></thead><tbody><tr><td>5</td><td>17-4-2023</td><td>9-6-2023</td><td></td><td>X</td><td></td><td></td><td>X</td></tr></tbody></table>  | Period   | Start | End | Mon | Tue | Wed | Thu | Fri | 5 | 17-4-2023 | 9-6-2023 |  | X |  |  | X |
| Period                               | Start   | End      | Mon   | Tue | Wed | Thu | Fri |     |     |   |           |          |  |   |  |  |   |
| 5                                    | 17-4-2023   | 9-6-2023 |       | X   |     |     | X   |     |     |   |           |          |  |   |  |  |   |
| Level                                | Intermediate/Advanced   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Coordinator                          | Andre Berger For more information:a.berger@maastrichtuniversity.nl  |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Language of instruction              | English   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Goals                                | Understanding the role and operation of decision support systems. Independent development of a decision support system.<br>Master programming in Excel and the design of user interfaces in VBA for Excel.  |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Description                          | <p>PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. A RE-EMERGENCE OF THE CORONAVIRUS AND NEW COUNTERMEASURES BY THE DUTCH GOVERNMENT MIGHT FORCE COORDINATORS TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS.</p> <p>A decision support system (DSS) is a model-based or knowledge-based system intended to support managerial decision making in semi-structured or unstructured situations. A DSS is not meant to replace a decision maker, but to extend his/her decision making capabilities. It uses data, provides a clear user interface, and can incorporate the decision maker's own insights. During the course, you get acquainted with decision support systems, their use and their most important components. You learn how to design and develop a decision support system that facilitates decision making - in the context of a company or service provider - through specific selection criteria and constraints. This will require precise communication and efficient and harmonious cooperation between you and your teammate.</p> <p>Very importantly, you learn how to code in the programming language Excel VBA, in order to build a decision support system. This will help you develop and improve your skills in algorithmic thinking. In particular, you learn how create userforms, and how to use tools provided by the toolbox. You learn essential programming techniques and constructs such as loops, subs, functions and macros. All this knowledge will be very useful basically in any programming environment.</p> |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Literature                           | <p>In addition, you learn how to describe and present such a decision support system in the form of a report. We will provide a reader with all necessary information. Other resources include, but are not limited to:</p> <ul style="list-style-type: none"><li>* Albright, S. C. (2006). VBA for Modelers: Developing Decision Support Systems Using Microsoft Excel (2nd ed.). Duxbury Press.</li><li>* Holsapple, C. W. and A. B. Winston (1996). Decision Support Systems; a knowledge-based approach. West Publishing Company.</li><li>* Mallach, E. G. (2000). Decision Support and Data Warehouse Systems. McGraw-Hill.</li><li>* Sauter, V. (1997). Decision Support Systems. John Wiley &amp; Sons inc.</li><li>* Seref, M. M., R. K. Ahuja, and W. L. Winston (2007). Developing Spreadsheet-Based Decision Support Systems. Belmont, USA: Dynamic Ideas.</li><li>* Turban, E. and J. E. Aronson (2007). Decision Support Systems and Intelligent Systems (8th ed.). Prentice Hall Business Publishing.</li></ul>   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Prerequisites                        | <p>Basic mastery of Excel, or an alternative spreadsheet application: cell referencing, building formulas, use of logical functions.<br/>This does not include mastery of VBA for Excel: training in VBA programming is part of the course.</p>   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Teaching methods                     | An advanced level of English.<br>Lecture / Groupwork / Coaching   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| Assessment methods                   | Final Paper / Assignment / Presentation   |          |       |     |     |     |     |     |     |   |           |          |  |   |  |  |   |
| 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

|   |   |
|---|---|
| Bachelor Economics and Business Economics - Economics                               | Year 3 Quantitative Economics Elective(s)   |
| Bachelor Economics and Business Economics - Emerging Markets                        | Year 3 Elective Course(s)                   |
| Bachelor Economics and Business Economics - Economics and Management of Information | Year 2+3 Quantitative Economics Elective(s) |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj Accounting          |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj Finance             |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj Inf Mgmt            |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj Marketing           |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj Org                 |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj SCM                 |
| Bachelor Economics and Business Economics - International Business Economics        | Year 3 QE Elec(s) - Maj Strategy            |
| Bachelor International Business - Emerging Markets                                  | Year 3 Elective Course(s)                   |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj Accounting          |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj Finance             |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj Inf Mgmt            |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj Marketing           |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj Org                 |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj SCM                 |
| Bachelor International Business   | Year 3 QE Elec(s) - Maj Strategy            |
| SBE Exchange Bachelor   | Bachelor Exchange Courses                   |
| SBE Exchange Master   | Bachelor Exchange Courses                   |
| SBE Non Degree Courses  | Bachelor Courses                            |