

**Annex 2: Module description for the Consecutive Degree Programme in Business & Economics leading to the award of Master of Science**

This document is a translated version and legally not binding. Only the study documents published in the official announcements of Chemnitz University of Technology are legally binding.

**Specialization module**

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| <b>Module number</b>   | 261037-300 (version 02)   |
| <b>Module name</b>   | Supply Chain Management   |
| <b>Module coordinator</b>  | Professorship Business Administration – Production and Industrial Management  |
| <b>Content and qualification objectives</b>                              | <p><u>Content:</u></p> <p>The module deals with supply chain management. It focuses on interconnected production and logistics companies that interact to meet customer needs. Individual topics include:</p> <ul style="list-style-type: none"> <li>• Building and expanding on knowledge of basic concepts and structures of supply chains based on theoretical approaches and real-world examples</li> <li>• Analysis and design of robust supply chains considering various sources of uncertainty</li> <li>• Experiencing the dynamics in supply chains through the beer game</li> <li>• Model-based analysis of the bullwhip effect, its causes as well as methods to overcome the effect</li> <li>• Modeling and solving operational decision problems of inventory management under certainty and uncertainty from a company-specific perspective</li> <li>• Central and contract-based coordination of operational inventory management decisions based on contract theory from a supply chain perspective</li> <li>• Modeling and solving strategic-tactical decision problems of the design of supply chains using warehouse location, facility location and center problems</li> </ul> <p><u>Qualification objectives:</u></p> <p>After successful completion of the module, students are able to identify and explain business challenges in the interaction of companies in complex, networked value creation processes. They can discuss supply chain dynamics based on the bullwhip effect and identify and justify solution strategies to overcome it. Students are able to describe, model and solve operational decision-making problems in inventory management. They will be able to distinguish between single-company-optimal and supply-chain-optimal decisions. In addition, they can determine coordinating decisions based on contract theory in simple supply chains and have an understanding of the transfer to complex supply chains. Finally, they are able to name and discuss decision problems in the design of supply chains as well as to model selected decision problems and solve them using heuristic methods.</p> |
| <b>Teaching methods</b>  | <p>The module teaching methods are lecture and exercise course.</p> <ul style="list-style-type: none"> <li>• Lecture: Supply Chain Management (2 teaching units)</li> <li>• Exercise course: Supply Chain Management (1 teaching unit)</li> </ul> <p>The classes may be conducted in German or in English.</p>  |
| <b>Requirements for participation (recommended knowledge and skills)</b> | See the list of course materials  |
| <b>Module application</b>  | The module is suitable for all degree programs with an economic orientation as well as for other degree programs.   |
| <b>Requirements for the award of credit points</b>                       | Successfully passing the module examination is required for the awarding of credit points.  |

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| <b>Module examination</b> | The module examination consists of one assessment component. <ul style="list-style-type: none"><li>• 60-minute written examination on Supply Chain Management (Examination number: 61808)</li></ul> The assessment component must be taken in German or in English. |
| <b>Credits and grades</b> | This module is worth 5 credit points.<br>Section 10 of the Examination Regulations specifies how the assessment component is assessed and how the module grade is calculated.   |
| <b>Frequency</b>          | The module is offered each academic year.   |
| <b>Number of hours</b>    | The module requires students to complete a total of 150 study hours.  |
| <b>Module duration</b>    | Under normal circumstances, the module is completed in one semester.  |