Module:	**Automotive Supply Chain Management**			**No. 4.3**
Responsible for the module:	Prof. Dr. Joerg-Oliver Vogt			
Teachers:	Prof. Dr. Tobias Engel			
Language:	English	**Semester:**	**4th curriculum semester**	
Teaching Form:	Seminars, exercises	**Scope:** The attendance time can be reduced by up to 25% due to eLearning modules - the timetable of the respective semester regulates the attendance time.	4 SWS	
Value of the module grade for the overall grade:	2,4 %	**ECTS credits:**	5	
Planned Group Size:	---	**Duration:**	1 semester	
Frequency of Offering:	each semester			
Applicability within the degree program:	---			
Applicability to other courses of study:	Business administration, business information technology or similar			
Workload:	**Total**	**Presence time**	**Exercises**	**Self-study**
	150 h	45 h	---	105 h
Contents build on the following lectures / contents:	• Fundamentals of Business Administration, especially basics about Porter´s generic strategies and about the balance scorecard • Fundamentals of production and logistics • Business Process Management, ability to sketch business processes using, e.g., UML or ARIS • Databases, e.g., ability to access a MySQL database • Finance and accounting, knowledge about accounts, the balance sheet, and the profit and loss statement • Programming, e.g., ability to develop dashboards using Excel, Tableau, RapidMiner			

Learning Outcome:	An application-oriented simulation game is used to convey the learning content, which expands the content on a weekly basis with the help of the flipped-classroom methodology and enables the students to self-reflect by means of a discussion as well as with the help of the application of the game itself. The following learning objectives will be achieved in the course: • be able to classify and explain supply chain management as a development stage of logistics as well as its relevance for companies and its contribution to value creation • be able to record, explain and analyse business processes in the logistics and supply chain sector • To be able to explain the relevance of finance and accounting and to be able to apply and develop content - in particular profit and loss accounts and balance sheets. • Development & analysis of supply chain strategies • Integration of stand-alone strategies into an integrated supply chain strategy • Understand supply chain collaboration, apply collaboration concepts and evaluate their effectiveness. • To be able to develop and apply risk management solutions and to be able to evaluate them in the game with regard to sustainability. • To be able to use knowledge management in the context of the game and assess its value or impact on the financial. • Create data science, in particular analytics and intelligence solutions, and apply and evaluate them with regard to their possible applications in the game. • Understand specific automotive challenges in SCM and know best practice solutions to apply in the simulation game.
Contents:	• Fundamentals of Supply Chain Management: (1) Business Processes: From Logistics to Supply Chain Management, (2) Relevance and Benefits of SCM. Tasks and challenges as well as target dimensions and design levels • Supply Chain Simulation Game: Analysis, design, planning and iterative development of vertical and horizontal processes from the field of supply chain management. • Supply chain management: strategies, processes and interdependencies with other functions and divisions • Collaboration • Risk management: Ensuring the sustainability of supply chains • Financial flow: costs, turnover, controlling • Knowledge Management • Data Science: Business Analytics & Business Intelligence • Current trends & technologies in the field of SCM, e.g. RFID, Business Intelligence, Supply Chain Risk Management, Blockchain, etc. • Best Practices Automotive Supply Chain Management
Methodological and key competences:	---
Examination and study performance:	**Examination:** Portfolio examination (seminar papers (group and individual performance) - details will be announced at the beginning of the first course. Weekly involvement and steady participation recommended.

Media and training materials:	**Media (**Mix between online courses and courses at the HNU**):** • Supply chain simulation game (online) • Zoom-sessions • Projector, whiteboard, flipchart, • Journal articles, also online **Training materials:** • Lecture notes • Flipped material, e.g. videos, (journal) articles, exercises provided within the learning management system (LMS)

Literature:	**Required reading:** • Engel, T. (2020): Supply Chain Strategy. From Strategy to Operational Excellence - A Practitioner's Guide, 1st ed. **Recommended reading:** • Werner, H. (2013): Supply Chain Management. Fundamentals, Strategies, Instruments and Controlling, 5th ed. • Ihme, J. Logistics in Automotive Engineering, Hanser 2006 • Bolstorff, P. A.; Rosenbaum, R. G.; Poluha, R. G. (2007): Excellence in Supply Chain Management. A practical handbook for optimization with SCOR, 1st edition, Springer, Berlin, Heidelberg, New York. • Ehrlach, K. (2010): Value stream design. The way to the lean factory. 2nd ed., Springer, Heidelberg • Current studies (Moodle course)
Date:	10.12.2021