Course Descriptions None 2025-2026

Course Title	ICT in the Supply Chain*
Course Code	EBC4114
ECTS Credits	6,5
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
4	2-2-2026	27-3-2026	X				

Level	Advanced
Coordinator	Simon Bartczek For more information:s.bartczek@maastrichtuniversity.nl
Language of instruction	English
Goals	Participants will learn to understand the role of information technology in global supply chains.
Description	Management of global supply chains is impossible without using information and communication technology. Advances in ICT such as the internet and wireless communication have had a dramatic impact on supply chains and the way supply chain processes are managed. In this course we systematically address the technologies and systems which play a role in contemporary supply chain management. We will treat topics such as digital transformation, big data analytics, omnichannel retailing, e-procurement, e-supply chain management, e-business, e-marketplaces, et cetera. We will not only focus on the systems, but also on the management aspects of implementing and choosing these ICT systems. Examination will be done in the form of facilitations, a company project and a final paper.
Literature	Porter, M.E. (2001). Strategy and the Internet. Harvard Business Review, 79(3), 2-19. Porter, M. E., & Heppelmann, J. E. (2014). How smart, connected products are transforming competition. Harvard business review, 92(11), 64-88. Teece, D. J. (2010). Business models, Business Strategy and Innovation. Long Range Planning, 43(2), 172-194. Büyüközkan, G., & Göçer, F. (2018). Digital supply chain: literature review and a proposed framework for future research. Computers in Industry, 97, 157-177. Furr, N., & Shipilov, A. (2019). Digital Doesn't Have to Be Disruptive The best results can come from adaptation rather than reinvention. Harvard Business Review, 97(4), 94-103. Hartley, J. L., & Sawaya, W. J. (2019). Tortoise, not the hare: Digital transformation of supply chain business processes. Business Horizons, 62(6), 707-715. McGrath, R., & McManus, R. (2020). Discovery-Driven Digital Transformation. Harvard Business Review, 98(3), 124-133. Hagiu, A., & Wright, J. (2020). When data creates competitive advantage. Harvard Business Review, 98(1), 94-101. Kache, F., & Seuring, S. (2017). Challenges and opportunities of digital information at the intersection of Big Data Analytics and supply chain management. International Journal of Operations & Production Management, 37(1), 10-36. Gunasekaran, A., Papadopoulos, T., Dubey, R., Wamba, S. F., Childe, S. J., Hazen, B., & Akter, S. (2017). Big data and predictive analytics for supply chain and organizational performance. Journal of Business Research, 70, 308-317. Ameen, N., Tarhini, A., Shah, M., & Madichie, N. (2021). Going with the flow: smart shopping malls and omnichannel retailing. Journal of Services Marketing, 35(3), 325-348. DHL Supply Chain (2019). Omni-Channel Retail: Fulfilling Demand Profitably. Quach, S., Barari, M., Moudrý, D. V., & Quach, K. (2020). Service integration in omnichannel retailing and its impact on customer experience. Journal of Retailing and Consumer Services, https://doi.org/10.1016/j.jretconser.2020.102267. DHL Supply Chain (2019). The E-Commerce Supply Chain: Overcoming Growing Pains. Hallikas, J., Immonen, M., & Brax, S. (2021). Digitalizing procurement: the impact of data analytics on supply chain performance. Supply Chain Management: An International Journal, 26(5), 629-646. Min, H. (2019). Blockchain technology for enhancing supply chain resilience. Business Horizons, 62(1), 35-45. Allison, S., Pawlowski, J., & Frances, N. (2019). The future of the Services Supply Chain – a DHL perspective on key trends and technologies in service logistics. DHL Supply Chain. Kohtamäki, M., Einola, S., & Rabetino, R. (2020). Exploring servitization through the paradox lens: Coping practices in servitization. International Journal of Production Economics, 226, 107619. Vendrell-Herrero, F., Bustinza, O. F., Parry, G., & Georgantzis, N. (2017). Servitization, digitization and supply chain interdependency. Industrial Marketing Management, 60, 69-81.
Prerequisites	An introduction to Supply Chain Management equivalent to for instance EBC1029 Fundamentals of Supply Chain Management
Transitional Regulations	
Teaching methods	PBL / Presentation / Lecture / Assignment / Papers / Groupwork
Assessment methods	Final Paper / Attendance / Presentation
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

Master Global Supply Chain Management and Change	Compulsory Courses