



Ruhr Master School
of Applied Sciences

Dieses Wahlpflichtmodul ist ein Angebot der:

**Fachhochschule
Dortmund**

University of Applied Sciences and Arts

**Masterstudiengang Digital
Transformation**

Human Centered Digitalization

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Hochschule Bochum
Bochum University
of Applied Sciences



Fachhochschule
Dortmund
University of Applied Sciences and Arts



Westfälische
Hochschule
Gesamthochschule Bocholt Recklinghausen
University of Applied Sciences

STIFTUNG
MERCATOR





Module Description for Block Week Module:

Module title	Human Centered Digitalization
Offering course of studies	Digital Transformation
University Campus	FH Dortmund
Language	English
Module representative/ Full-time lecturer	Prof. Dr. Christian Reimann
Contact	Christian.reimann@fh-dortmund.de

Abbreviation	Workload	Credits	Semester (WiSe/SuSe)	Planned group size	
				minimum	maximum
MOD-E03 48202	180	6	WiSe	5	25
Courses/course types Attendance	Contact time		Self-study		
	Attendance during block week	Additional contact time during preparation and postprocessing e.g. videoconference	Guided during preparation and postprocessing	selfdirected	
	40	20		120	
Teaching types preparation	Getting started session online, preparation task is given during online session, to be completed before Blockweek				
Teaching types postprocessing	Assignment (group work) with scientific aspects (mainly literature work), presentation of results (online)				

* It is possible to purchase additional ECTS-points for extra accomplishments.

Teaching results/ teaching goals/competences
<p>7.1 Knowledge</p> <ul style="list-style-type: none"> • Knows relevant theoretical foundations, area: computer science and society • Know methodical background of case studies and surveys • Is aware of critical limitations of methods for evaluating impact <p>7.2 Skills</p> <ul style="list-style-type: none"> • Can analyze the impact of changes in information technology on individuals, environment and society, based upon a given past scenario



- Can evaluate, analyze (and within limits predict) the impact of new products/services on individuals, environment and society, during the concept and development phase
- Can conduct methodologically structured evaluations (e.g. field observation, lab tests) and surveys

7.3 Competence – attitude

- Can discuss impacts of changes in information technology on individuals, environment and society with experts
- Can advise during product/service development potential impacts of product/service structure/features on individuals, environment and society
- Understands scientific publication in the related areas

Contents

Digitalization in private and professional domains is influencing intensely and sometimes even revolutionizing people's life, the way they interact with systems, the way they interact between each other, the way a society changes. Within this course those influences will be addressed from two different viewpoints. From an analytical perspective, former and current developments and their influences will be analyzed and then projected on future trends. From a constructive perspective, those potential influences of e.g. a product or service currently in development will be taken into account to shape the prospective solution.

- Basic Overview "Computer Science & Society"
- Ethics in computer science
- Digital media and art
- Surveillance and privacy
- Artificial Intelligence and responsibility
- Sustainability through Digital Transformation
- Case Studies "Disruptive Changes by Information Technology"
- Digitalization of work life & work environments, processes, products and services

Evaluation of impacts (personal, environment, society)

Participation requirements	interest in IT technology and its impact on society
Examination types	Practical Skills (50%): Group work and/or individual task, case studies and projects => demonstration/presentation of the result and Scientific Competences (50%): written paper (literature review, study report or survey, approx. 25 pages) and presentation (in class or at a student conference, e.g. International Research Conference Dortmund)
Requirement for rewarding credit points	
Application of the modul (in other courses)	See website Ruhr Master School
Literature	Basics: - Luciano Floridi, The Logic of Information: A Theory of Philosophy as Conceptual Design, Oxford University Press, 2019 - Luciano Floridi, The Ethics of Information, Oxford University Press, 2015 - John Weckert (Editor), Computer Ethics, Routledge, 2019 - Charles Ess, Digital Media Ethics 3 rd Edition, Polity, 2020



- Simon Winter, Human values in a digital society. ACM XRDS 25, 1, Fall 2018

- (announced) P. G. Kirchschräger, Digital Transformation and Ethics: Ethical Considerations on the Robotization and Automatization of Society and Economy and the Use of Artificial Intelligence. Germany: Nomos, 2021

Practitioner:

- eHealth: Legal, Ethical and Governance Challenges, Carlisle George, Diane Whitehouse, Penny Duqueno, Springer Science & Business Media, 2012

- An Ethical Global Information Society: Culture and democracy revisited
IFIP Advances in Information and Communication Technology, Jacques J. Berleur, Diane Whitehouse, Springer, 2013

- Human Choice and Computers: Issues of Choice and Quality of Life in the Information Society Volume 98 of IFIP Advances in Information and Communication Technology, Klaus Brunnstein, Jacques Berleur, Springer, 2013

- B. Bhushan et al. (Editors), Impact of Digital Transformation on Security Policies and Standards, Information Science Reference, 2019

- ACM Code of Ethics, <https://www.acm.org/code-of-ethics>

- IEEE Code of Ethics, <https://www.ieee.org/about/corporate/governance/p7-8.html>

- IEEE Code of Conduct, https://www.ieee.org/content/dam/ieee-org/ieee/web/org/about/ieee_code_of_conduct.pdf

Research (Conferences, Journals and selected papers):

- ACM Special Interest Group on Computers and Society (SIGCAS), <https://dl.acm.org/sig/sigcas>

- ACM SGICAS Conference on Computing and Sustainable Societies (COMPASS)

- C&T'19, 9th International Conference on Communities & Technologies – Transforming Communities, Vienna 2019

- Kalpana Shankar, Future proofing the digital society: an introduction to digital curation and data practices. SIGCAS Comput. Soc. 46, 1, March 2016

- Åke Grönlund, Participating in the Digital Society. Digit. Gov.: Res. Pract. 1, 2, Article 17, April 2020

- Wail El Hilali and Abdellah El Manouar, Towards a sustainable world through a SMART digital transformation. In Proceedings of the 2nd International Conference on Networking, Information Systems & Security, NISS19, 2019



	<ul style="list-style-type: none">- Dongwook Kim, Hun-Yeong Kwon, Daesung Jun, Eunmi Lee, Loni Hagen, and Soon Ae Chun, Opportunities and challenges in the intelligent society: smart cities, digital inclusion, and cybersecurity. In Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age (dg.o '18), 2018- P. G. Kirchschräger, Digital transformation of society and economy - ethical considerations from a human rights perspective. International Journal of Human Rights and Constitutional Studies, 6 (4), 301–321, 2019- P. G. Kirchschräger, Homo Dignitatis – Ethical Orientation for Digital Transformation. Psychologie in Österreich, 4 (39), 274–284, 2019
Notes	