

Handbook of Modules  
for the two-year M.A. Program  
Transformation Management in Digital Societies  
(2y MA DS)



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Contents of the modules and examinations can vary depending on the lecturer of the course. Current information can be found in the online course catalogue or via the intranet ZU|hause.

## Foundation Phase

## Mandatory Modules: The World of the 21st Century

Module 244111   Seminar series: Technological Megatrends and Problem Complexes in the Digital Age					
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Dr Lennart Brand	
Prerequisites				Entspr. FSPO §2	
Use of module				Foundation Phase	
<b>Content:</b>  This module has two goals: on the one hand, experts from academia and professional practice introduce students to the state of technological development in different areas (which can and will change, currently e.g. mobility, urban development, energy, artificial intelligence, space travel, etc.) and provide a forecast of upcoming development phases. Secondly, the effects of these technologies on the economy, society and the state are examined, or rather students investigate which economic, social and governmental framework conditions have which effects on the development of new technologies.					
<b>Qualification Objectives:</b>  The module opens the discussions which will be continued during the study program by defining the problems or making them definable. Upon completion of the module, students should be able to realistically assess the technological basis of the present and near future and establish relationships between technology on the one hand and the economy, society, and government on the other.					
<b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 244111 Seminar series: Technological Megatrends and Problem Complexes in the Digital Age				6	3

Module 241125   Philosophy of Present-Day Culture					
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				manatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Take home exam	
Scope and Length of Examinations				25.000 signs	
Module Responsibility				Dr Joachim Landkammer	
Prerequisites				-	
Use of module				Foundation Phase	
<b>Content:</b>  The seminar is intended to acquaint participants with current attempts to conceptualize the understanding, the possibilities and the limits of "culture". Cultural philosophical considerations should enable students to critically reflect on the often-unquestioned basic norms of contemporary cultural activity and the terms used to legitimize its practices (such as "creativity", "participation", "mediation", "interculturality") and to discuss their argumentative basis, historical contextualization and practical consequences. In addition, it will be examined which conceptualizations, perspectives and theories could be suitable for providing or questioning a description of "culture in general" that is not only contemporary, but sustainable for the future; in this context, questions will be addressed about the connection between culture and consumption, culture and capital, as well as culture, power and violence.					
<b>Qualification objectives:</b>  Through reading and text-based discussions, the students learn to move in a conceptually secure and reflected, self-thinking way in the discourses of justification and legitimation of the cultural sector. Familiarity with a theory-based diagnosis of the present (e.g. based on considerations by Peter Sloterdijk, Byung-Chul Han, Giorgio Agamben, Judith Butler, Wolfgang Ullrich and others) enables students to conceive and design non-trivial, innovative cultural projects.					
<b>Literature:</b>  Ralf Konersmann (Hg.): Handbuch Kulturphilosophie, Metzler, Stuttgart & Weimar 2012					
Courses in the module				ECTS	Hours
C 241125 Philosophy of Present-Day Culture				6	3

Module 244112   Artificial and Human Intelligence					
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Periodr				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				Completed BA-studies	
Use of Module				Foundation Phase	
<b>Content:</b>  The module introduces the field of artificial intelligence from a theoretical perspective. It is used to assess the potential, risks, peculiarities and social consequences of its use. For this purpose, the module resorts to a direct comparison of artificial intelligence with human intelligence, i.e. intelligence endowed with consciousness. What can machines do, what can they not do, and what can they do better or worse than humans? By asking such questions, the current disconnect between intelligence and consciousness becomes tangible, a concept which is revolutionizing our lives, our self-image, and our thinking.					
<b>Qualification Objectives:</b>  In this module, students learn to assess the phenomenon of the use of artificial intelligence through its characteristics, its consequences and its possibilities. Future decision-makers in business and politics will be introduced to the complexity of technological development, social scientists will learn to assess the synergies and upheaval of human societies, and at the same time the module will open up a theoretical background to consciousness against which pressing problems of our time can be discussed.					
<b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 244112 Artificial and Human Intelligence				6	3

## Elective Modules: Interdisciplinary Perspectives

Module 100111   History of Economic Theory				
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs):27/123
Teaching Methode				
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>
Period				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				Teaching Agreement
Scope and Length of Examinations				Teaching Agreement
Module Responsibility				Prof. Dr. Dr. Manfred Moldaschl <a href="https://www.zu.de/lehre/stuehle/audi/index.phpmailto:manfred.moldaschl@zu.de">https://www.zu.de/lehre/stuehle/audi/index.phpmailto:manfred.moldaschl@zu.de</a>
Prerequisites				-
Use of Module				Foundation Phase
<p><b>Content:</b></p> <p>The seminar on the history of economic theory deals with the question of how and why economics became what it is, and thus also what OTHER could be. It is about socio-scientific contexts and basic assumptions, of economic theories. Classical texts of great economists and philosophers will be read and discussed together. The course ranges from Aristotle to the French Physiocrats and representatives of the classical period such as Adam Smith and David Ricardo, via Marx to the emergence of neoclassicism (Jevons, Menger) and evolutionary economics. Students thus explore main paths of economic thought, including forks and dead ends. Economic controversies such as the so-called Methodenstreit (Menger versus Schmoller) and the Werturteilsstreit (Max Weber) are also covered. Finally, students deal with central texts of particularly influential economists of the 20th century: Joseph Schumpeter, John Maynard Keynes, Friedrich von Hayek and Douglass C. North. In the process, questions from related disciplines are touched upon, from philosophy of science and ethics to economic history, sociology, and cultural history. Thus, this course is a building block of interdisciplinary study.</p> <p><b>Qualification Objectives:</b></p> <p>Through the course "History of Economic Theory" students have a sound overview of the development of economics and know central landmarks in the history of economic analysis. They can critically discuss original texts with the help of relevant literature and apply knowledge of important basic economic concepts in the discussion of current issues.</p> <p><b>Literature:</b></p> <p>Priddat, Birger: B. Theoriegeschichte der Wirtschaft. Weinheim et al, 2002Kurz, Heinz (ed.), Klassiker des ökonomischen Denkens, 2 vols, Munich 2008Joseph Schumpeter, Geschichte der ökonomischen Analyse, 2 vols, Göttingen 1965.</p> <p>Hunt, E.K.; Lautzenheiser, M.: history of economic thought (2011, 3rd.ed.).</p>				
Courses in the module				ECTS      Hours
C 100111 History of Economic Theory				6      3



Module 231031-6   Theories of Communication					
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Periodr				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Hausarbeit   Präsentation/Referat   mündl. Prüfung   Take Home Examen	
Scope and Length of Examinations				25.000 Zeichen	
Module Responsibility				Prof Dr Udo Göttlich	
Prerequisites					
Use of Module				Foundation Phase	
<p>Content:</p> <p>The module addresses and deepens media-sociological and communication-scientific questions about individual orientation and social integration as well as the relationship between communicative action and social structures from different theoretical perspectives. It also problematizes the social function of mass media and mass communication and their change in the process of media-tization, deals with communicative dimensions for social order and stability and deals with the role of digital media development for social and cultural developments. This is also done using specific fields of communication studies such as the theory of public communication, crisis and risk communication, for example.</p> <p>Qualification objectives:</p> <p>The module teaches basic knowledge of various communication terms and theories and gives an overview of the structures and dynamics of communication in different areas of culture and society, especially in relation to the change of communication in the public sphere.</p> <p>Literature:</p> <p>Burkart, Roland (2002): Kommunikationswissenschaft, Wien, Köln, Weimar. Habermas, Jürgen (1990): Strukturwandel der Öffentlichkeit, Frankfurt a.M. Harvard, Stig (2008): The Mediatization of Society. A Theory of the Media as Agents of Social and Cultural Change, in: Nordicom Review, Jg. 29., H. 2., S. 105-134. Imhof, Kurt (2006): Mediengesellschaft und Medialisierung, in: Medien und Kommunikationswissenschaft, Jg. 54., H. 2., S. 191-215. Schützeichel, Rainer (2004): Soziologische Kommunikationstheorien, Konstanz.</p>					
Courses in the module				ECTS	Hours
C 231031-6 Theories of Communication				6	3

Module 233021-6   Comparative Politics & Institutions					
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode			seminar		
Event Type			mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>		
Periodr			1 semester		
Rotation			yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>		
Examination					
Scope and Length of Examinations					
Module Responsibility			Prof Dr Joachim Behnke		
Prerequisites					
Use of Module			Foundation Phase		
<p>Contents</p> <p>The module specializes on political and administrative comparisons and covers both the institutional and the actor-centered dimensions of social and political power structures (polity and politics dimensions), as well as the policy dimension of the contents of political programs (policy analysis). In its overall perspective the module thus provides a comprehensive overview of the main governance models in a European and non-European, as well as international comparison.</p> <p>Qualification Objectives</p> <p>Thus, the students are enabled to analyze and evaluate converging and diverging developments of governance systems. They can critically evaluate policy transfers and the diffusion of political solutions in their scope, and can analyze them on a sound methodological basis.</p> <p>Literature</p> <p>Boix, Charles/ Susan C. Stokes (Hrsg.)(2007): The Oxford Handbook of Comparative Politics. Oxford</p> <p>Clark, William Roberts/ Matthew R. Golder/ Sona Nadenichek Golder (Hrsg.) (2017): Principles of Comparative Politics. Sage</p> <p>McCormick, John/ Rod Hague / Martin Harrop (Hrsg.)(2019): Comparative Government and Politics: An Introduction. Red Globe Press.</p>					
Courses in the module				ECTS	Hours
C 233021-6 Comparative Politics & Institutions				6	3

Module 100115   Social Theory					
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Presentation and term paper	
Scope and Length of Examinations				Presentation: 30 mins; term paper: 10,000 characters excl. spaces	
Module Responsibility				Prof Dr Maren Lehmann	
Teilnahmevoraussetzungen				-	
Use of Module				Foundation Phase	
<b>Content</b>  Society, initially understood as the remainder of the state, has become the surrounding condition of every social form since the French Revolution. The seminar is about understanding the ‘Weltgesellschaft’ that is emerging in this way as a differentiated social form in which the meaning domains of economics, politics, law, art and science are interwoven and gain contours through each other.  <b>Qualification Objectives</b>  The students practice the critical, reflected work with texts and arguments, which they learn to respect and discuss as diagnoses of their respective historical contexts and as hypotheses of what is socially possible.  <b>Literature</b>  Luhmann, Niklas (1997): Die Gesellschaft der Gesellschaft. 2 Bde. Frankfurt am Main: Suhrkamp.					
Courses in the module				ECTS	Hours
C 100115 Social Theory				6	3

## Major Phase

## Mandatory Modules: General Basics

Module 241118   Digital Public Spheres				
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs):27/123
Teaching Methode				seminar
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>
Period				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				Term paper   presentation   oral examination   take-home exam
Scope and Length of Examinations				25.000 characters
Module Responsibility				Prof Dr Udo Göttlich
Teilnahmevoraussetzungen				Basic knowledge of public sphere theory and media and communication studies
Use of Module				Major Phase
<p><b>Content:</b></p> <p>The transformation of mass communication through the digitalization of media communication has led to a fundamental change in the “meaning of the public sphere” in media society. Although public communication is the medium of “self-reference for social order” in modern societies, the forms of public communication and participation as well as the structure of public arenas and forums are changing with the increasing spread of digital media. How are these shifts to be understood, in which domains do they take place and what are their possible consequences for the integration of society and culture through communication? The module deals with current social media and communications theory-related questions on the transformation of the public sphere and the problems and challenges of fragmented public spheres as well as so-called public sphere platforms. In this context, the module investigates the development dimensions and changes in the public sphere as well as the resulting challenge for the “programming of public spirit” in the media society.</p> <p><b>Qualification Objectives:</b></p> <p>The module deepens basic knowledge of public sphere theory and its possible application to the description and analysis of the digital transformation of the public sphere in media society. Participants will learn to assess theoretical approaches in terms of their analytic potential and epistemological implications.</p> <p><b>Literature:</b></p> <p>Eisenegger, Mark et al. (ed.) (2020): Digitaler Strukturwandel der Öffentlichkeit. Historische Verortung, Modelle und Konsequenzen, Wiesbaden: Springer.</p> <p>Habermas, Jürgen (1990): Strukturwandel der Öffentlichkeit, Frankfurt a.M.</p> <p>Harvard, Stig (2008): The Mediatization of Society. A Theory of the Media as Agents of Social and Cultural Change, in: Nordicom Review, vol. 29., book 2., p. 105-134.</p> <p>Imhof, Kurt (2011): Die Krise der Öffentlichkeit. Kommunikation und Medien als Faktoren des sozialen Wandels, Frankfurt a.M.: Campus Verlag.</p> <p>Lindgren, Simon (2017): Digital Media &amp; Society, London et al.: Sage.</p>				
Courses in the module				ECTS
C 241118 Digital Public Spheres				6
				Hours
				3

Module 244113   Ethics and Responsibility in Philosophy & Society					
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Presentation and term paper	
Scope and length of examination				Teaching Agreement	
Module Responsibility				Dr Philipp Kleinmichel Dr Joachim Landkammer	
Prerequisites				-	
Use of Module				Major Phase	
<b>Content:</b> <p>In 1979, the philosopher Hans Jonas showed in his much-discussed book "<i>Das Prinzip Verantwortung</i>" (The Principle of Responsibility) what a "new" form of ethics might look like, a form of ethics that would take into account the technical possibilities of human action and their risky consequences. According to his findings, if ethics is to be relevant to today's decisions and dangers, it must be based on a different philosophy than that of the classical-traditional ethics of Christianity and the Enlightenment. In line with this thinking, the reading-based seminar discusses the possible contribution of philosophical thought to the debate on the moral consequential problems of digitalization (surveillance, data protection, social media, virtualization, artificial intelligence, and other issues). The module attempts to make a critical and philosophically reflective evaluation of the (ideal) ideas of man associated with digitalization: man's individuality and sociality, his communication and media "competence" as well as his moral-spiritual autonomy in relation to the "machine".</p> <p>In the seminar, students can select examples of some of the fundamental ethical debates (also in their literary and cinematic representations) surrounding current digitization processes and discuss them from a philosophical perspective.</p> <b>Qualification Objectives:</b> <p>Students acquire the ability to pose ethical questions about digitization trends and their consequences in a critical and fundamental, i.e. <i>philosophical</i>, manner. In this way, students not only learn to articulate culturally critical or pessimistic reservations but also reflect upon the respective relative and contingent status of these forms of questioning.</p> <b>Literature:</b> <p>Petra Grimm / Tobias O. Keber / Oliver Zöllner (Hg.): Digitale Ethik. Leben in vernetzten Welten, Reclam, Ditzingen, 2019.</p> <p>Julian Nida-Rümelin / Nathalie Weidenfeld: Digitaler Humanismus. Eine Ethik für das Zeitalter der Künstlichen Intelligenz, Piper, München, 2018.</p>					
Courses in the module				ECTS	Hours
C 244113 Ethics and Responsibility in Philosophy & Society				6	3

Module 241128   Prognostics & Scenario Development					
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Term paper, presentation	
Scope and length of examination				Teaching Agreement	
Module Responsibility				Prof Dr Josef Wieland	
Prerequisites				-	
Use of Module				Major Phase	
<b>Content:</b> <ul style="list-style-type: none"><li>Basics: Meaning and purpose of futurology</li><li>Methods 1: Different approaches to futurology</li><li>Methods 2: Methodological fundamentals</li><li>Methods 3: Scenario development</li><li>Application areas of futurology 1: Business</li><li>Application areas of futurology 2: Technology</li><li>Application areas of futurology 3: Politics and Society</li><li>Criticism of futurology</li><li>Innovation research</li></ul>					
<b>Qualification Objectives:</b> <p>The primary goal of the module is to prepare students for the Possible Futures track in the 3rd semester. They should understand why prognostics/forecasting is an indispensable tool for strategic planning in technology, business, politics and society, especially under the conditions of globalization of exponential technological development, and in which contexts it is embedded. To this end, they should become thoroughly familiar with the basic idea, approaches and methodologies as well as the different areas of application of futurology and be able to critically reflect on and question futurology. In doing so, it will also become clear to what extent futurology refers to established scientific procedures and at the same time transcends them.</p>					
<b>Literature:</b> The literature will be specified in each course.					
Courses in the module				ECTS	Hours
C 241128 Prognostics & Scenario Development				6	3

## Elective Modules "Methods"

Module 522045-6   Quantitative Methods				
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Method				seminar
Event type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>
Period				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				Teaching Agreement
Scope and Length of Examination				Teaching Agreement
Module Responsibility				LS Computational & Social Science
Prerequisites				-
Use of Module				Major Phase
<b>Content:</b>  In this course, basic and advanced quantitative methods of economics are taught. Concrete contents refer to the areas of regression analysis and diagnostics (OLS), marginal effects, sampling and weighting, as well as selected test statistics (t-test, F-test).  <b>Qualification objectives:</b>  The students    acquire basic and advanced knowledge in selected quantitative methods of economics;    are enabled to select quantitative empirical methods on a case-specific basis and to discuss them critically.  <b>Literature:</b>  Wooldridge, J.M. (2012). Introductory econometrics: A modern approach. South-Western College Publishers.				
Courses in the module				ECTS
C 522045-6 Quantitative Methods				6
				Hours
				3

Module 244121   Qualitative and Analytical Methods					
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Term paper, presentation	
Scope and Length of Examinations				s. ZU hause bzw. Vorlesungsverzeichnis	
Module Responsibility				Dr Philipp Kleinmichel Dr Joachim Landkammer	
Prerequisites				-	
Use of Module				Major Phase	
<b>Content:</b>  The module follows a structured introduction to theoretical-cultural analytical issues. The focus here is not so much on teaching individual cultural-analytical methods from image, media, or art theory, but rather on a theoretical-analytical examination of different forms of expression, which can include literary texts, musical compositions, images, and films, as well as performances, video games, and rituals, but which deal with the relation of man and machine in terms of content. In doing so, the module aims, on the one hand, to familiarize students with cultural figures, patterns, and tropes, as well as with formal and aesthetic problems of representation that are essential to the horizon of meaning in contemporary social change. On the other hand, the seminars of the module also provide methodological insights into the specific questions and problem areas of working in cultural studies.					
<b>Qualification Objectives:</b>  Students acquire the ability to deal with questions in the humanities and cultural theory using various methods. Students gain knowledge of various forms of high and popular culture in which ideas of social-technological change are expressed. To this end, the courses provide a methodical introduction to cultural-theoretical-analytical procedures and take individual cultural forms of expression as an opportunity to analyze basic questions and problems of contemporary social-technological change.					
<b>Literature:</b>  Freud, Unbehagen in der Kultur McLuhan, Die magischen Kanäle Mersch, Ordo ob Chaos Baudrillard, Extreme Phänomene Adorno/Horkheimer, Dialektik der Aufklärung Kittler, Optische Medien					
Courses in the module				ECTS	Hours
C 244121 Qualitative and analytical Methods				6	3



Module 12344   Advanced Methods					
MA DS	Semester 2	4 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 48/89	
Teaching Method				project work, workshop	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input type="checkbox"/> per semester <input checked="" type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examination				Teaching Agreement	
Module Responsibility				Prof Dr Franziska Peter Lehrstuhl für Empirische Kapitalmarkt- forschung & Ökonometrie	
Prerequisites					
Use of Module				Major Phase	
<b>Content:</b> The module „Advanced Methods I“ consists of the participation in two methods workshops. Students may combine workshops at their own discretion, as long as appropriately designated workshops (Nr. 123241-44) are concerned. In every semester one or two workshops are offered. Example topics are: <ul style="list-style-type: none"><li>  Time Series Analysis</li><li>  Case Study Design</li><li>  Qualitative Comparative Analysis (QCA)</li><li>  Agent Based Modelling</li><li>  Multivariate Data Analysis</li><li>  Analysis of Binary and Categorical Data</li><li>  Qualitative Content Analysis</li><li>  Quantitative Content Analysis (including computerized techniques)</li><li>  Network Analysis</li><li>  Cluster Analyse</li><li>  Panel Data Analysis</li><li>  Grounded Theory</li><li>  Design-based Causal Inference</li><li>  Hermeneutics</li><li>  Discourse Analysis</li></ul> <b>Learning objectives</b> Students are introduced to innovative and advanced techniques of data collection and data analysis in the social sciences. They learn to apply the methods critically and in a reflected manner. <b>Literature:</b> Reading will depend on the specific workshops as specified					
Courses in the module				ECTS	Hours
C 123241-44   Advanced Methods				3	2
C 123241-44   Advanced Methods				3	2

## TRACK 1: Possible Futures

## Shaping Digital Futures

Module 244131   Sociology of Time					
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Presentation and term paper	
Scope and length of examination				Presentation: 30 mins; term paper: 10,000 characters excl. spaces	
Module Responsibility				Prof Dr Maren Lehmann	
Teilnahmevoraussetzungen				Successful completion of module 244111 Seminar series: Technological Megatrends and Complex Problems in the Digital Age	
Use of Module				Major Phase	
<b>Content:</b> The seminar develops an understanding of time as the present difference of past and future. What does the present mean if it can only be understood against the double horizon of the past and the future? What does the future mean if it is only possible as another side of the past? Can time be calculated, can the past be criticized, can the future be designed?					
<b>Qualification Objectives:</b> Students practice critical, reflective engagement with texts and argumentations that they learn to respect and discuss as diagnoses of their respective historical contexts and as hypotheses of what is socially possible.					
<b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 244131 Sociology of Time				6	3

Module 244132   Science, Fiction and Society					
MA DS	Semester 1	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period				1 semester	
Rotaion				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				Completed BA studies	
Use of Module				Major Phase	
<b>Content:</b>  Both technical and social reality is determined by plans, mind games, simulations, experiments that require a high degree of creative inventiveness. It is therefore not surprising that both were conversely anticipated and influenced by works of fiction. Reflection on technological and social constructions of reality requires more than what can be fathomed from scenarios and forecasts; it must also take place on the basis of speculation. In this module, students are introduced to speculative thinking. The module teaches them to recognize which fictions can gain scientific weight under which conditions - and they learn to make the unpredictable a research object.  <b>Qualification Objectives:</b>  In this module, students learn a free but decidedly scientific way of thinking that enables them to deal with uncertainties and future alterities. It draws on scientific theories of the future, on science fiction, and also on creative processes of speculative thinking.  <b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 244132 Science, Fiction and Society				6	3

Module 244133   Digital Entre-/Intrapreneurship				
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Methode				seminar
Event Tyoe				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>
Period				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				Graded essay: 10 pages (25,000 characters)
Scope and Length of Examinations				Ungraded presentation and graded essay
Module Responsibility				Dr Lennart Brand
Prerequisites				Entspr. FSPO §2
Use of Module				Major Phase
<p><b>Content:</b></p> <p>The theoretical part of the module introduces the basics of sustainable startup management, business design and intrapreneurship. Particular attention is paid to digital aspects. Using relevant literature, case studies and expert workshops, students are taught how to transform ideas and projects into a suitable business or organizational form. In a practical part, participants develop and analyze their own startup or intrapreneurship concepts. Students form teams of 2-3 and work together to design and define a "startup concept" and develop a go-to-market strategy and financial plan. Students will work according to the "Lean Startup" method, which means that each week there will be specific tasks and expected results. At the end of the course, students will present and discuss their startup-concept (graded essay) during a pitch session (ungraded presentation).</p> <p><b>Qualification Objectives:</b></p> <p>Students will be able to work on the key steps to design and launch a digital business. Students gain knowledge of market analysis, value proposition design and customer development, financial planning, and go-to-market strategies. They will also learn and apply the Lean Startup Methodology by designing and developing their own startup through iterations and MVP refinements.</p> <p><b>Literature:</b></p> <p>Business Model Generation, Alex Osterwalder &amp; Yves Pigneur  Startup Playbook, Sam Altman (Y Combinator)  H-FARM's Presentations and Materials</p>				
Courses in the module				ECTS      Hours
C 244133 Digital Entre-/Intrapreneurship				6      3

Module 244134   Coding/Virtual Reality Design					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Programming and modeling tasks, final project	
Scope and Length of Examinations				Depending on the project work	
Module Responsibility				Dr Lennart Brand	
Prerequisites				Entspr. FSPO §2	
Use of Module				Major Phase	
<b>Content:</b>  This module introduces students to the theory, principles, and practice of Virtual Reality (VR) and provides hands-on experience through the development of VR-based projects. At the beginning of the course, students will learn the basic principles of VR and virtual environments, the historical development of the technology and its fields of application in a theoretical part and additionally acquire the basics of computer graphics and 3D modeling. In the practical part, students can develop various applications by creating virtual environments and designing interactions and animations using Maya and Unity as digital tools. As a final project, each student will develop his/her own project to demonstrate how he/she has mastered the skills acquired.					
<b>Qualification Objectives:</b>  Upon completion, students will have developed an understanding of the basic concepts of Virtual Reality and the key phases for developing VR-based projects. Students will be able to design essential - but fully functional - VR applications, use digital tools (Maya and Unity), and master basic activities such as 3D modeling and programming.					
<b>Literature:</b>  tba Digital Tools' Manuals (e.g. Maya, Unity)					
Courses in the module				ECTS	Hours
C 244134 Coding/Virtual Reality Design				6	3

Module 24353/24354 or 24355   Elinor-Ostrom- or Practice Project					
MA DS	Semester 3	3 Contact Hours	18 ECTS	Contact Time/Self-study (in hrs): 27/423	
Teaching Methode				Individual support, independent project	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input type="checkbox"/> per semester <input checked="" type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				-	
Use of Module				Major Phase   Track 1-4	
<b>Content:</b>  In the “Elinor Ostrom or Practice Project” module, students learn under the guidance of project supervisors to pursue an independently developed research question in science or in research-oriented professional fields - and to work in a methodically clean manner. The module offers students the chance to carry out a supervised research-oriented project with academic support at a department, research cluster, research association or research center of ZU, an academic partner institution or a partner institution from business, administration or politics. In connection with this research project, students will prepare a report in the form of a term paper or scientific paper. The project takes as its subject an issue from the field of prognostics, futurology or innovation management in administration, politics, business or culture.					
<b>Qualification Objectives:</b>  Students learn to work in a team of researchers or practitioners. They acquire the ability to formulate a research question and to work on and answer it using an appropriate theoretical and methodological toolkit. In addition, they learn to write their own academic texts.					
<b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 114712 Research Colloquium				3	2
C 123241-44 Advanced Methods				3	1,5
C 243522 Research Project				15	
Module 24355 Practice Project				18	

## TRACK 2: Ethics and Innovation

Module 244141   Digital Ethics				
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Methode				seminar   group work
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>
Period				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				written test   presentaion   term paper
Scope and Length of Examinations				Teaching Agreement
Module Responsibility				Prof Dr Josef Wieland
Prerequisites				-
Use of Module				Major Phase
<b>Content:</b>  The module will address the core issues and main currents of the discipline of digital ethics and distinguish it from related fields such as machine ethics, AI ethics, and information ethics. Digital ethics is understood as a framework of values for the implications of digital transformation and the digitization of the economy and society, and provides the normative basis for political regulation. In addition to discussing the implications of digitization, big data, artificial intelligence and their use cases at the macro, meso and micro levels of society, the module will also address the general topic of human-machine interaction. The fields of application of digital ethics range from the chal- lenge of reconciling globally divergent understandings of digital ethics to changes in the world of work and in business models, but also to questions of individual privacy, personal rights and data protection rights. Within the seminar, therefore, there will be discussions about the possible values of a digital society and students will examine how their safeguarding can be ensured. A focus will continue to be on a subtopic of digital ethics, the ethics of artificial intelligence and robotics. At this point, human-machine interaction, as well as the debate around moral machines, will be high- lighted. In addition to basic theoretical considerations, students will continue to work with numer- ous practical and applied examples. In addition to the analysis or development of a <i>corporate digital responsibility</i> strategy, this can also involve the investigation of options for assuming responsibility when using autonomous systems or data protection measures.				
<b>Qualification Objectives:</b>  The focus is on governance, strategy, law and responsibility in the context of digital transformation and exponential technologies. In addition to achieving a holistic understanding of digital ethics, stu- dents learn to independently penetrate and question current research in these areas and then ap- ply it appropriately in analyses and evaluations. After completing the seminar, students will be fa- miliar with and discuss a variety of theoretical approaches in digital ethics and will be able to recog- nize and apply them through numerous real-world examples. In their theses, students conduct their own research in one of the subfields of digital ethics, contributing to the expansion of existing theory or the development of new theory.				
<b>Literature:</b> tba				
Courses in the module				ECTS    Hours
C 244141 Digital Ethics				6    3

Module 244142   Shared Value Creation and Impact Innovation					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): xx/xx	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Grades Essay	
Scope and Length of Examination				Approx. 25,000 characters incl. spaces	
Module Responsibility				Prof Dr Josef Wieland	
Prerequisites				Entspr. FSPO §2 und §4(5)	
Use of Module				Major Phase	
<b>Content:</b>  In social and economic discussion, the consideration that the goal of economic activity should be Shared Value Creation (SVC) is becoming increasingly important. As an alternative to the shareholder value theory, this concept emphasizes in the political debate that the results of private and public value creation must accrue to all stakeholders invested in it. Questions of justice and distribution are in the foreground, as are concepts of the common good economy. In the field of management theory and industrial economics, SVC is understood as an approach to the strategic management of collaborative rents, either as a market or stakeholder strategy. Social challenges such as sustainability, climate change, social standards and human rights in global value networks then become growth opportunities for companies and society. Finally, SVC refers to quantitative approaches to measuring the productive social impact of corporate activity. New forms of accounting and reporting open up the possibility of recording the costs and returns of a company's social commitment, communicating them publicly and using them for the company's strategic orientation. Students learn about the various aspects and models of SVC in their theoretical foundation and practical application. Appropriate accounting practice models are introduced and applied in case studies.  <b>Qualification Objectives:</b>  Students learn the different forms and types of social and private value creation. Business ethics, corporate social responsibility, social, human rights and sustainability standards and the stakeholder management required for these are taught from a value-creation perspective and developed through case studies themselves. Practical methods of non-financial reporting and the resulting key figures for corporate management are developed independently by the students.  <b>Literature:</b>  Porter / Kramer, Creating Shared Value Josef Wieland (ed.) Creating Shared Value Josef Wieland u.a., CSR Perfomance: managen und messen Josef Wieland, Relational Economics					
Courses in the module				ECTS	Hours
C 244142 Shared Value Creation / Impact Innovation				6	3



Module 244133   Digital Entre-/Intrapreneurship					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Tyoe				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Graded essay: 10 pages (25,000 characters)	
Scope and Length of Examinations				Ungraded presentation and graded essay	
Module Responsibility				Dr Lennart Brand	
Prerequisites				Entspr. FSPO §2	
Use of Module				Major Phase	
<b>Content:</b>  The theoretical part of the module introduces the basics of sustainable startup management, business design and intrapreneurship. Particular attention is paid to digital aspects. Using relevant literature, case studies and expert workshops, students are taught how to transform ideas and projects into a suitable business or organizational form. In a practical part, participants develop and analyze their own startup or intrapreneurship concepts. Students form teams of 2-3 and work together to design and define a “startup concept” and develop a go-to-market strategy and financial plan. Students will work according to the “Lean Startup” method, which means that each week there will be specific tasks and expected results. At the end of the course, students will present and discuss their startup-concept (graded essay) during a pitch session (ungraded presentation).  <b>Qualification Objectives:</b>  Students will be able to work on the key steps to design and launch a digital business. Students gain knowledge of market analysis, value proposition design and customer development, financial planning, and go-to-market strategies. They will also learn and apply the Lean Startup Methodology by designing and developing their own startup through iterations and MVP refinements.  <b>Literature:</b>  Business Model Generation, Alex Osterwalder & Yves Pigneur Startup Playbook, Sam Altman (Y Combinator) H-FARM’s Presentations and Materials					
Courses in the module				ECTS	Hours
C 244133 Digital Entre-/Intrapreneurship				6	3

Module 244134   Coding/Virtual Reality Design					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Programming and modeling tasks, final project	
Scope and Length of Examinations				Depending on the project work	
Module Responsibility				Dr Lennart Brand	
Prerequisites				Entspr. FSPO §2	
Use of Module				Major Phase	
<b>Content:</b>  This module introduces students to the theory, principles, and practice of Virtual Reality (VR) and provides hands-on experience through the development of VR-based projects. At the beginning of the course, students will learn the basic principles of VR and virtual environments, the historical development of the technology and its fields of application in a theoretical part and additionally acquire the basics of computer graphics and 3D modeling. In the practical part, students can develop various applications by creating virtual environments and designing interactions and animations using Maya and Unity as digital tools. As a final project, each student will develop his/her own project to demonstrate how he/she has mastered the skills acquired.  <b>Qualification Objectives:</b>  Upon completion, students will have developed an understanding of the basic concepts of Virtual Reality and the key phases for developing VR-based projects. Students will be able to design essential - but fully functional - VR applications, use digital tools (Maya and Unity), and master basic activities such as 3D modeling and programming.  <b>Literature:</b>  tba Digital Tools' Manuals (e.g. Maya, Unity))					
Courses in the module				ECTS	Hours
C 244134 Coding/Virtual Reality Design				6	3

Module 24353/24354 or 24355   Elinor-Ostrom- or Practice Project					
MA DS	Semester 3	3 Contact Hours	18 ECTS	Contact Time/Self-study (in hrs): 27/423	
Teaching Methode				Individual support, independent project	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input type="checkbox"/> per semester <input checked="" type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				-	
Use of Module				Major Phase   Track 1-4	
<b>Content:</b>  In the “Elinor Ostrom or Practice Project” module, students learn under the guidance of project supervisors to pursue an independently developed research question in science or in research-oriented professional fields - and to work in a methodically clean manner. The module offers students the chance to carry out a supervised research-oriented project with academic support at a department, research cluster, research association or research center of ZU, an academic partner institution or a partner institution from business, administration or politics. In connection with this research project, students will prepare a report in the form of a term paper or scientific paper. The project takes as its subject an issue from the field of prognostics, futurology or innovation management in administration, politics, business or culture.					
<b>Qualification Objectives:</b>  Students learn to work in a team of researchers or practitioners. They acquire the ability to formulate a research question and to work on and answer it using an appropriate theoretical and methodological toolkit. In addition, they learn to write their own academic texts.					
<b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 114712 Research Colloquium				3	2
C 123241-44 Advanced Methods				3	1,5
C 243522 Research Project				15	
Module 24355 Practice Project				18	

## TRACK 3: Digital Business Models

Module 244151   Understanding Consumer Behavior in the Digital Age				
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Methode				seminar
Event Type				mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>
Perios				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				Class Presentation and Final Exam
Scope and Length of Examinations				30 minutes group presentation and 60 minutes written exam
Module Responsibility				Prof Dr Martin Meißner
Prerequisites				Basis Marketing knowledge Basic knowledge in descriptive statistics
Use of Module				Major Phase
<b>Content:</b>  Digitalization has fundamentally changed how consumers search for information, connect with other consumers and companies as well as how they make purchase decisions. It is also fundamentally transforming business models of many companies across a wide range of industries and professions. For students it is crucial to understand the ways in which new digital technologies are going to change business models as well as marketing practices. Therefore, the aim of the course is to introduce and discuss technological changes such as social media and social networks, big data, internet of things, artificial intelligence, augmented and virtual reality and their impact on business models and marketing practices.  This course discusses consumer behavior theory and its relevance in the digital age. We explore theories and models of consumer behavior and learn to use them to better understand and predict how consumers will respond to (digital) marketing actions.  <b>Qualification Objectives:</b>    Students are expected to demonstrate knowledge about the psychological and sociological concepts and theories and their relevance in the digital age.    Students learn to analyze and critically discuss the main assumptions and components of (digital) consumer buying behavior.    Students learn to apply theories and models of consumer behavior to real-world marketing phenomena.  <b>Literature:</b>  Solomon, M.R., Askegaard, S., Hogg, M.K., & Bomossy, G.J. (2019). Consumer Behaviour: A European Perspective (7th edition). Pearson. Martínez-López, F.J., Anaya-Sánchez, R., Aguilar-Illescas, R., Molinillo, S. (2015). Online Brand Communities. Using the Social Web for Branding and Marketing. Springer. Journal articles (tba)				
Courses in the module				ECTS      Hours
C 244151 Understanding Consumer Behavior in the Digital Age				6      3

Module 244152   Digital Business					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Prof Dr Christian Opitz	
Prerequisites				-	
Use of Module				Major Phase	
<b>Content:</b> tba					
<b>Qualification Objectives:</b> tba					
<b>Literatur:</b> tba					
Courses in the module				ECTS	Hours
C 244152 Digital Business				6	3

Module 244133   Digital Entre-/Intrapreneurship				
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Methode				seminar
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>
Period				1 semester
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>
Examination				Graded essay: 10 pages (25,000 characters)
Scope and Length of Examinations				Ungraded presentation and graded essay
Module Responsibility				Dr Lennart Brand
Prerequisites				Entspr. FSPO §2
Use of Module				Major Phase
<p><b>Content:</b></p> <p>The theoretical part of the module introduces the basics of sustainable startup management, business design and intrapreneurship. Particular attention is paid to digital aspects. Using relevant literature, case studies and expert workshops, students are taught how to transform ideas and projects into a suitable business or organizational form. In a practical part, participants develop and analyze their own startup or intrapreneurship concepts. Students form teams of 2-3 and work together to design and define a "startup concept" and develop a go-to-market strategy and financial plan. Students will work according to the "Lean Startup" method, which means that each week there will be specific tasks and expected results. At the end of the course, students will present and discuss their startup-concept (graded essay) during a pitch session (ungraded presentation).</p> <p><b>Qualification Objectives:</b></p> <p>Students will be able to work on the key steps to design and launch a digital business. Students gain knowledge of market analysis, value proposition design and customer development, financial planning, and go-to-market strategies. They will also learn and apply the Lean Startup Methodology by designing and developing their own startup through iterations and MVP refinements.</p> <p><b>Literature:</b></p> <p>Business Model Generation, Alex Osterwalder &amp; Yves Pigneur  Startup Playbook, Sam Altman (Y Combinator)  H-FARM's Presentations and Materials</p>				
Courses in the module				ECTS
C 244133 Digital Entre-/Intrapreneurship				Hours
				6
				3

Module 244134   Coding/Virtual Reality Design					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Methode				seminar	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				Programming and modeling tasks, final project	
Scope and Length of Examinations				Depending on the project work	
Module Responsibility				Dr Lennart Brand	
Prerequisites				Entspr. FSPO §2	
Use of Module				Major Phase	
<b>Content:</b>  This module introduces students to the theory, principles, and practice of Virtual Reality (VR) and provides hands-on experience through the development of VR-based projects. At the beginning of the course, students will learn the basic principles of VR and virtual environments, the historical development of the technology and its fields of application in a theoretical part and additionally acquire the basics of computer graphics and 3D modeling. In the practical part, students can develop various applications by creating virtual environments and designing interactions and animations using Maya and Unity as digital tools. As a final project, each student will develop his/her own project to demonstrate how he/she has mastered the skills acquired.  <b>Qualification Objectives:</b>  Upon completion, students will have developed an understanding of the basic concepts of Virtual Reality and the key phases for developing VR-based projects. Students will be able to design essential - but fully functional - VR applications, use digital tools (Maya and Unity), and master basic activities such as 3D modeling and programming.  <b>Literature:</b>  tba Digital Tools' Manuals (e.g. Maya, Unity)))					
Courses in the module				ECTS	Hours
C 244134 Coding/Virtual Reality Design				6	3

Module 24353/24354 or 24355   Elinor-Ostrom- or Practice Project					
MA DS	Semester 3	3 Contact Hours	18 ECTS	Contact Time/Self-study (in hrs 27/423)	
Teaching Methode				Individual support, independent project	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input type="checkbox"/> per semester <input checked="" type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examinations				Teaching Agreement	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				-	
Use of Module				Major Phase   Track 1-4	
<b>Content:</b>  In the “Elinor Ostrom or Practice Project” module, students learn under the guidance of project supervisors to pursue an independently developed research question in science or in research-oriented professional fields - and to work in a methodically clean manner. The module offers students the chance to carry out a supervised research-oriented project with academic support at a department, research cluster, research association or research center of ZU, an academic partner institution or a partner institution from business, administration or politics. In connection with this research project, students will prepare a report in the form of a term paper or scientific paper. The project takes as its subject an issue from the field of prognostics, futurology or innovation management in administration, politics, business or culture.  <b>Qualification Objectives:</b>  Students learn to work in a team of researchers or practitioners. They acquire the ability to formulate a research question and to work on and answer it using an appropriate theoretical and methodological toolkit. In addition, they learn to write their own academic texts.  <b>Literature:</b> tba					
Courses in the module				ECTS	Hours
C 114712 Research Colloquium				3	2
C 123241-44 Advanced Methods				3	1,5
C 243522 Research Project				15	
Module 24355 Practice Project				18	



## TRACK 4: Digital Politics &amp; Society

Module 243113   Computational Political Sciences				
MA DS	Semester 2	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Method			project work, workshop	
Event Type			mandatory <input type="checkbox"/> elective <input type="checkbox"/>	
Period			1 semester	
Rotation			yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				
Scope and Length of Examination				
Module Responsibility			Prof Dr Martin Elff, Prof Dr Joachim Behnke	
Prerequisites				
Use of Module			Major Phase	
<b>Content:</b> The “digital transformation”, the increasing importance of (digital) information technology and of digital modes of communication, is a major source of technical, economical, and social innovations. Yet it also poses considerable challenges to society, politics, and policy. This module examines these challenges from a social science perspective. It also provides an overview of the methods and methodologies that are necessary to deal with these new possibilities and challenges in empirical social and political research. One set of methods and methodologies comprises the computer-assisted collection of textual data from the Internet (“web scraping”) and the analysis of (usually large) text corpora thus generated, e.g. using topic modelling and algorithms of natural language processing (NLP). Another set of methods comprises the reconstruction and analysis of complex social networks, processes, and organisations using agent-based modelling or non-linear systems modelling. The analysis of social processes based on extensive spatio-temporal event data and behavioural data or the use and further development of computational methods in the construction, estimation, and application of complex statistical and econometrical models are also potential topics of this module.				
<b>Qualification Objectives</b> Students acquire and understanding how computational approaches to social science research questions and to social and political problems differ from traditional approaches and are provided with an overview of the relevant methods and techniques.				
<b>Literature</b>   Alvarez, R. Michael. 2016. <i>Computational Social Science: Discovery and Prediction</i> . Cambridge: Cambridge University Press.   Blätte, Andreas, Joachim Behnke, Kai-Uwe Schnapp und Claudius Wagemann. 2018. <i>Computational Social Science. Die Analyse von Big Data</i> . Baden-Baden: Nomos.				
Courses in the module				
C 243113 Computational Political Sciences				

Module 243171   Human Decision Making				
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Methode			project work, workshop	
Event Type			mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period			1 semester	
Rotation			yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination				
Scope and Length of Examination				
Module Responsibility			Prof Dr Anja Achtziger	
Prerequisites				
Use of Module			Major Phase	
<b>Content:</b> We will explore psychological processes of decisions in general and more specifically in the legal domain. After an introduction to important theories and models and empirical findings on human decisions and their weaknesses, we will start to discuss decisions by algorithms. Since nowadays, governments are increasingly interested in the use of algorithms in decision making, we will delve deeper into the literature on costs and benefits of using AI systems especially in the legal system.				
<b>Qualification Objectives:</b> Students will understand the basics of human decision making and automatic decisions by algorithms. In addition, they learn to reflect on the fairness of algorithmic decisions and how to test the quality of an algorithm. They will also understand what Big Data are.				
<b>Literature:</b> Literature will be announced at the beginning of the semester.				
Courses in the Module				
C 243171 Human Decision Making				
				</

Module 233041   Public Management and Digital Transformation				
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123
Teaching Methode			seminar	
Event Type			mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>	
Period			1 semester	
Rotation			yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>	
Examination			Exam or Paper	
Scope and Length of Examination				
Module Responsibility			Prof Dr Ulf Papenfuß	
Prerequisites				
Use of Module			Major Phase	
<b>Content:</b>  This module deals with different current challenges in the field of "Public Management & Digitisation". It deals with the overarching question of how public task performance can be made effective and efficient under conditions of scarcity, taking into account rationalisation conflicts between economic, political and legal rationalities. In particular, the guiding concept of evidence-based management and policy-making will be discussed and applied.				
<b>Qualification Objectives:</b>  The students can,    classify and discuss basic theories, concepts and literature of the specific topics and policy areas    understand and evaluate concrete problems of the subject areas and present them in an understandable way through literature research, discourse and analysis    understand, analyse and apply theoretical concepts and theories dealing with specific challenges to concrete examples    have developed key qualifications such as presentation skills, project/time management, teamwork skills, etc.				
<b>Literature:</b>    Ferlie, E./Lynn, L./Pollit, C. (2007): The Oxford Handbook of Public Management, Oxford.    Pollitt, C./Bouckaert, G. (2011): Public Management Reform: A Comparative Analysis, 3. Auflage, Oxford				
Courses in the Module I				
C 233041 Public Management and Digital Transformation				
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Module 243122   Administrative Informatics and Artificial Intelligence					
MA DS	Semester 3	3 Contact Hours	6 ECTS	Contact Time/Self-study (in hrs): 27/123	
Teaching Method			seminar		
Event Type			mandatory <input type="checkbox"/> elective <input checked="" type="checkbox"/>		
Period			1 semester		
Rotation			yearly <input checked="" type="checkbox"/> per semester <input type="checkbox"/>		
Examination			Paper with Presentation, Discussion		
Scope and Length of Examination			Presentation of 30min & Paper of 15 pages		
Module Responsibility			Prof Dr Jörn von Lucke		
Prerequisites			Basic knowledge of Public Administration, preferably: basic knowledge of Administrative Informatics		
Use of Module			Major Phase		
<b>Content:</b>  With this module, the existing knowledge should be deepened and the understanding of new technologies should be strengthened. The aim is that students will learn the relevance and the possible uses of information technologies and artificial intelligence for government modernisation, organisation and process.  <b>Qualification Objectives:</b>  The course deals with current trends in computer science for administration and artificial intelligence in the public sector. The application-oriented use of modern information and communication technologies in administration will be in the foreground, whereby current technology trends and projects relevant to the public sector at federal, state and municipal level will be given special consideration. With a view to current developments, the thematic focus shifts from year to year.  The students gain insight into current trends, novel concepts, models and tools of public sector informatics, learn about possible applications and should be enabled to prepare and make strategic decisions on the use of innovative technologies. The programming of computers and computer networks is not part of the module.  <b>Literature:</b>    Hessische Zentrale für Datenverarbeitung: Trendberichte: <a href="https://hzd.hessen.de/presse/publikationen/trendberichte-der-hzd">https://hzd.hessen.de/presse/publikationen/trendberichte-der-hzd</a> .    Kompetenzzentrum Öffentliche IT: Trendschau: <a href="https://www.oeffentliche-it.de/trendschau">https://www.oeffentliche-it.de/trendschau</a> .    Government Information Quarterly: <a href="https://www.journals.elsevier.com/government-information-quarterly">https://www.journals.elsevier.com/government-information-quarterly</a> .					
Courses in the Module				ECTS	Hours
C 243122 Administrative Informatics and Artificial Intelligence				6	3

Module 24353/24354 or 24355   Elinor-Ostrom- or Practice Project					
MA DS	Semester 3	3 Contact Hours	18 ECTS	Contact Time/Self-study (in hrs): 27/423	
Teaching Method				Individual support, independent project	
Event Type				mandetory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input type="checkbox"/> per semester <input checked="" type="checkbox"/>	
Examination				Teaching Agreement	
Scope and Length of Examination				Teaching Agreement	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				-	
Use of Module				Major Phase   Track 1-4	
<b>Content:</b>  In the “Elinor Ostrom or Practice Project” module, students learn under the guidance of project supervisors to pursue an independently developed research question in science or in research-oriented professional fields - and to work in a methodically clean manner. The module offers students the chance to carry out a supervised research-oriented project with academic support at a department, research cluster, research association or research center of ZU, an academic partner institution or a partner institution from business, administration or politics. In connection with this research project, students will prepare a report in the form of a term paper or scientific paper. The project takes as its subject an issue from the field of prognostics, futurology or innovation management in administration, politics, business or culture.  <b>Qualification Objectives:</b>  Students learn to work in a team of researchers or practitioners. They acquire the ability to formulate a research question and to work on and answer it using an appropriate theoretical and methodological toolkit. In addition, they learn to write their own academic texts.  <b>Literature:</b> tba					
Courses in the Module				ECTS	Hours
C 114712 Research Colloquium				3	2
C 123241-44 Advanced Methods				3	1,5
C 243522 Research Project				15	
Module 24355 Practice Project				18	

## Master Phase

Module 55000   Final module					
MA DS	Semester 4	0 SWS	24 Contact Hours	Contact Time/Self-study (in hrs): 0/600	
Teaching Methods				Individual support	
Event Type				mandatory <input checked="" type="checkbox"/> elective <input type="checkbox"/>	
Period				1 semester	
Rotation				yearly <input type="checkbox"/> per semester <input checked="" type="checkbox"/>	
Examination				Master Thesis and Disputation	
Scope and Length of Examination				approx. 150.000 signs, 45-60 min.	
Module Responsibility				Prof Dr Jan Söffner	
Prerequisites				-	
Use of Module				Master Phase	
<b>Content:</b>  The module provides the preparation for the master examination. The students become familiar with the standards of academic work on the master level and learn to present and defend their master thesis.  <b>Qualification Objectives:</b>  The students develop their own research question and answer it by critically reflecting on theories and methods of political and administrative sciences, as well as international relations					
Courses in the Module				ECTS	Hours
C 55000 Final module				24	0