

Teilmodul		TM-Kurzbezeichnung
KDTH: Design Thinking		KDTH
Verantwortliche/r	Fakultät	
Prof. Dr. Markus Heckner	Informatik und Mathematik	
Lehrende/r / Dozierende/r	Angebotsfrequenz	
Prof. Dr. Markus Heckner		
Lehrform		
Seminar with project work		

Studiensemester gemäß Studienplan	Lehrumfang [SWS oder UE]	Lehrsprache	Arbeitsaufwand [ECTS-Credits]
3. / 4. / 6. / 7.	4 SWS	englisch	5

Zeitaufwand:

Präsenzstudium	Eigenstudium
60h	90h

Studien- und Prüfungsleistung
Kl. u./o. StA. u./ o. mdl. LN

Inhalte
<p>The digitisation of our daily lives offers major innovation potential for organisations through such services as mobile apps, cloud services and applications in the Internet-of-things (IoT) sector. Not every technical innovation will achieve automatic success however. Many technical gadgets fail because users have no need for them, or because they are too complicated to use: Do users really want the water tap in the kitchen to respond to a verbal command delivered via Alexa? Do users really need the several dozen automatic baking programs offered by modern ovens? Do users actually want to start their dishwashers via a mobile app or want the app to tell them when the wash cycle has finished?</p> <p>It is only when digital services deliver a sustainable value for the user and can be used efficiently and effectively that they can earn broad acceptance and create lasting value for both users and society.</p> <p>This is where Design Thinking comes in: Design Thinking is an innovation method which, on the basis of an iterative process, delivers user- and customer-oriented results to solve complex problems.</p> <p>In this course, you will work on a project with students from various backgrounds (e.g. Industrial Design and Business studies). The project challenge usually comes from an industry partner or is derived from another real world problem without a business context.</p>

### Lernziele: Fachkompetenz

Nach der erfolgreichen Absolvierung des Teilmoduls sind die Studierenden in der Lage,  
recognize the relevance of including users in the development of (digital) products (3)  
name the phases and selected methods of the innovation methodology "Design Thinking" (1)  
apply the Design Thinking methodology as participants in a concrete project, without coaching  
or moderating other teams (2)  
appreciate the importance of iterative prototyping and user testing (3)  
develop small prototypes (e.g. with Arduino), test them with users and draw conclusions from  
user feedback (2) derive requirements from prototypes and test results and use agile project  
management tools to manage requirements (2)

### Lernziele: Persönliche Kompetenz

Nach der erfolgreichen Absolvierung des Teilmoduls sind die Studierenden in der Lage,  
successfully work together with other students from different subject areas (2)  
cope with uncertainty in the beginning of an innovation project (3)  
understand that the individual point of view on problems and their solutions often differs from a  
user's point of view (3)  
understand that initial failure is a core part of creative problem solving processes (3)

### Literatur

- Textbook/teaching material
- Own lecture notes
- Alvares de Souza Soares, P. (2016). Design Thinking - eine neue Denkschule erobert Deutschlands Strategie-Abteilungen. Online verfügbar: <http://www.manager-magazin.de/magazin/artikel/design-thinking-eine-kreativitaetstechnik-erobert-konzernzentralen-a-1086472.html>
- Dark Horse Innovation. (2017). Digital Innovation Playbook. Hamburg: Murmann Publishers GmbH.
- Ubernickel, F., Brenner, W., Pukall, B., Naef, T. & Schindlholzer, B. (2015). Design Thinking - Das Handbuch. Frankfurt: Frankfurter Societäts-Medien GmbH.

Die Zahlen in Klammern geben die zu erreichenden Niveaustufen an: 1 - kennen, 2 - können, 3 - verstehen und anwenden