Studienbrief

Projektmanagement und Professional Skills

Modul 2.3

Im Studiengang Biopharmazeutisch-Medizintechnische Wissenschaften

(Master of Science)

Modulnummer	2.3
Modultitel	Projektmanagement und Professional Skills
Leistungspunkte	6 ECTS
Sprache	Deutsch, Englisch
Modulverantwortlicher	Dr. Anne Bretschneider
Dozenten	Dr. Anne Bretschneider Dr. Klaus Pekari
Studiengang	Biopharmazeutisch-Medizintechnische Wissenschaften (M.Sc.)
Voraussetzungen (inhaltlich)	Grundkenntnisse in MS Office (Word/PowerPoint) und Internet-recherchen
Voraussetzungen (formal)	Keine
Lernziele	Das Modul vermittelt die Grundlagen des Wissenschaftlichen Arbeitens. Die Studierende können diese beschreiben und auf ihre eigene Tätigkeit übertrage sowie die zentralen Methoden zum Zeit- und Selbstmanagement erläutern und anwenden. Dabei ist es den Studierenden möglich, eine Methode hinsichtlich ihrer praktischen Funktionalität im eigenen (Berufs-) Alltag zu überprüfen. Verschiedene Modelle zur Führung, Konfliktmanagement und Problemlösetechniken sind den Studierenden geläufig und können von diesen unterschieden werden. Die Studierenden können die Methoden der Präsentation und Gesprächsmoderation umsetzen und auf die Situation abstimmen. Die Zusammenhänge von Führung und sozialem Verhalten im Team sind den Studierenden bekannt und können von diesen beurteilt werden. Die Studierenden können die eigene kommunikative Kompetenz in praktischen Übungen mit Unterstützung der Kommilitonen/ Kommilitoninnen erfassen, evaluieren und verbessern. Die Studierenden können eine Strategie für das Selbstmarketing entwickeln und anwenden.
Inhalte	**Professional Skills I** - Wissenschaftliches Arbeiten: - Literaturrecherche - Paper lesen und schreiben - Verfassen einer wissenschaftlichen Arbeit - DFG-Qualitätskriterien - Zitation von Literaturquellen - Präsentation und Moderation **Professional Skills II** - Zeit- und Selbstmanagement, Multitasking - Kommunikation und Gesprächsführung - Feedback - Selbstmarketing (Persönlichkeitsentwicklung) **Projektmanagement** - Führung, Team, Konflikte, Problemlösetechniken - Innovation und Kreativität (-stechniken) - Datenaufbereitung - Projektkoordination
Literatur	- Wissenschaftliches Arbeiten: Wissenschaft, Quellen, Artefakte, Organisation, Präsentation; Helmut Balzert, Marion Schröder, Christian Schäfer, 1. Auflage (2008) bzw. 2. Auflage (2011); ISBN: 3937137599

	- Schreiben und Publizieren in den Naturwissenschaften; Hans Ebel, Claus Bliefert, Walter Greulich, 2006; ISBN: 3527308024 - Bachelor-, Master- und Doktorarbeit: Anleitungen für den naturwissenschaftlich-technischen Nachwuchs; Hans Ebel, Claus Bliefert, 2. Auflage (2011); ISBN: 3527324771 - Projektmanagement: „Modernes Projektmanagement: Mit traditionellem, agilem und hybridem Vorgehen zum Erfolg“ ISBN 978-3527530489 - Führung: „Das Ende der Anweisung“ ISBN 978-3869367927 - Personal Skills: „The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change“ ISBN 978-1476740058 oder auf deutsch: „Die 7 Wege zur Effektivität: Prinzipien für persönlichen und beruflichen Erfolg“ ISBN 978-3869368948 - Feedback: „Führung: Feedback auf Augenhöhe: Wie Sie Ihre Mitarbeiter erreichen und klare Ansagen mit Wertschätzung verbinden (essentials)“ ISBN 978-3658157302
Lehrveranstaltungen und Lehrformen	Präsenzveranstaltungen: - mündliche Prüfung E-Learning - Online-Sprechstunde - Skripte und selbstständige Nachbereitung Summe: 180 h
Prüfungsform	20 min. Vortrag mit anschließender Diskussion

According to Cambridge Dictionary a **project** is defined as „a piece of planned work or an activity that is finished over a period of time and intended to achieve a particular purpose". We come into contact with projects in our everyday lives for example when we watch news on organization of a big sport event, or when we make a decision on building our own house.
"A **project is temporary** in that it has a defined beginning and end in time, and therefore defined scope and resources".[1]
A project is not a routine process since it requires a specific set of actions required to accomplish a **unique** goal. Therefore, a project may require involvement of persons, who typically do not work together, and at times across multiple locations, or even from various organizations.[2]
Projects in contrast to routine activities are complex and need to deal with uncertainty. Therefore, **project management** should not be seen as a routine activity for which all steps are easily defined from the beginning until the end. The more complex a project is the more uncertainty can be expected. Project Management Institute (PMI) defines project management as "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements".[3] **The main goal of project management is to bring a structure to a project to increase its probability of success**.

Watch the film "What is Project Management?" (mandatory):

Project is a piece of planned work or an activity that is finished over a period of time and intended to achieve a particular purpose. [Cambridge Dictionary]

Project Management comprises the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. [PMI, 2018]

A Project Manager is someone whose job is to plan a piece of work or activity and organize the work of all the people involved in it. [Cambridge Dictionary]

We can distinguish between **three types of project management**:[4]

1) classic (traditional)
2) agile
3) hybrid project management

[1] Cf. Project Management Institute (2018a): What is Project Management? Available online at https://www.pmi.org/about/learn-about-pmi/what-is-project-management, checked on 12/5/2018.
[2] Cf. Project Management Institute 2018a.
[3] Cf. Project Management Institute 2018a.
[4] Cf. Schloß, Bernhard; Botta, Christian (2017): Einführung ins Projektmanagement. Available online at https://fr.linkedin.com/learning/einfuhrung-ins-projektmanagement?trk=course_title, checked on 12/5/2018.

Classic project management (PM) (Figure 1) has its roots in the 1940s and was used for the first time by military. Between 1960s and 1980s project management started being used in other areas, for example in construction projects and information technology. Since 1990s small and medium firms began using classical project management methods as well.
The classical PM follows the logic of a linear process where all steps of a project occur sequentially, and it relies on predictable tools and experiences.[5] In this approach it is not expected that requirements change during the course of a project, and therefore the whole project, from the very beginning until the very end, is planned upfront.[6] The fact that the classic PM perceives requirements as fixed features implies that time and costs are recognized as variable features of a project. As a result this type of PM approach is likely to run into budget and timeline issues.[7]

Agile project management (Figure 1) was started being used by the end of 1990 by software developers. The reason for changing style of working with classical to agile PM was the impression that documentation and rules, which were characteristic for classical project management, would negatively affect project timeline. In 2001 seventeen software professionals wrote the Agile Manifesto[8], which is shown in Table 1.

The agile project management should be more flexible and slimmer than classical PM. Moreover, it does not use standardized processes. The traditional PM gives prominence to scope, cost and duration of a project. Instead, the agile PM gives importance to teamwork, flexibility and partnership with customer.[9] Teams using the agile approach to PM stay in a continuous exchange with their clients and are open to introduce changes to a project plan based on customers' feedback.[10]
The most popular agile frameworks used by software developers are Scrum and Kanban. [11] They are appreciated because they prevent investment of time and energy on aspects of a project prone to change. Moreover, they promote fast decision making. [12]
To learn more about differences between classic and agile project management, please have a look at the provided links on moodle.

Hybrid project management is a hybrid between classic and agile project management. Hybrid project management is further explained in the links on moodle.
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[5] Cf. Carr, Kira (2017): Agile Project Management Vs. Traditional Project Management. Available online at https://www.knowledgehut.com/blog/agile/agile-project-management-vs-traditional-project-management, checked on 12/5/2018.
[6] Cf. Carr 2017.
[7] Cf. Carr 2017.
[8] Cf. Beck, Kent; Beedle, Mike; van Bennekum, Arie; Cockburn, Alistair; Cunnungham, Ward; Fowler, Martin et al. (2001): Manifesto for Agile Software Development. Available online at https://www.agilealliance.org/agile101/the-agile-manifesto/, checked on 12/5/2018.
[9] Cf. Carr 2017.
[10] Cf. Carr 2017.
[11] Cf. Carr 2017.
[12] Cf. Carr 2017.

Ansprechpartner

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