Teilmodul	**TM-Kurzbezeichnung**
KFCA: Financial and Cost Analyses for IT Project Management	**KFCA**

Verantwortliche/r	Fakultät
Prof. Dr. Markus Westner	Informatik und Mathematik
Lehrende/r / Dozierende/r	Angebotsfrequenz
Prof. Dr. Lloyd Ling	
Lehrform	
Seminaristischer Unterricht und Übungen	

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
Project bidding and submission involves crucial cost analyses technique and the understanding of the Time Value of Money (TVM) concept. Funder and senior management often refer to cash flow diagrams (CFD) and cost analyses outcomes for decision-making. As such, it is important for IT professional to master the concept so that they are able to communicate with senior management to present their ideas or proposals in terms of financial values. Microsoft Excel will be used in this short course, whereby basic concepts of cost analyses, TVM, CFD, break even analysis and project management concept will be taught. Topic 1: Introduction to Financial and Cost Analyses • What is Financial and Cost Analysis? • The Financial Communication Language • Corporate culture, scheduling and deadlines • Proposal and report preparation – Dos and Don'ts Topic 2: Basic Statistics for IT Project Management • Applied Statistics Overview • Mean vs. Median • Pitfalls of Statistics • Sampling & Data Collection Topic 3: Financial Formulae (Part 1) • Time Value of Money (TVM) Formulae tutorial • Discount rate(s) • Cash Flow Diagrams (CFD) tutorials • Case Study: IT project CFD Analysis Topic 4: Financial Formulae (Part 2) • Cash Flow Diagrams (CFD) additional tutorials • Misuse and wrong concept of discount rate • Case Study: IT project CFD Analysis Topic 5: Multiple Cash Flow Diagrams (CFD) • Independent IT Project Analysis • Combining or simplifying CFD of a project • Concurrent or multiple IT project analysis • Case studies & Discussion Topic 6: Break-Even Analysis • Myth and misunderstanding about "Break-Even" • "Payback" study for IT project or programme? • Internal Rate of Return (IRR) versus Net Present Value (NPV) • Case studies & Discussion Topic 7: Exit Plans • What-If analyses • Optimized decision-making under IT project constraints • Sensitivity analysis towards optimized solution • Case studies & Discussion • Group presentation

Topic 8: Data Visualization Report Preparation and Presentation
- Summarizing your analyses and findings
- Presenting with tables and graphs in Excel
- Final report & presentation
- Case studies & Discussion
- Group presentation

Lernziele: Fachkompetenz

Nach der erfolgreichen Absolvierung des Teilmoduls sind die Studierenden in der Lage,
1)Construct cash flow diagrams (CFD) based on questions (2).
2)Apply Time Value of Money (TVM) concept with CFD to assess a project (2).
3)To apply the learned knowledge and hands-on practical knowledge in cost analyses to assess financial value of a project using Microsoft Excel or financial formulae (3).

Lernziele: Persönliche Kompetenz

Nach der erfolgreichen Absolvierung des Teilmoduls sind die Studierenden in der Lage,
1)To apply the learned knowledge and hands-on practical knowledge in cost analyses to assess financial value of any IT project (3).

Lehrmedien

1)Lecture (PowerPoint/PDF presentations and blackboard/whiteboard) with in class interactions.
2)Elaboration of solutions by group discussion (PowerPoint/whiteboard) or one to one question and answer.
3)Use of tutorial questions, case study and student presentations.
4)Online Teaching.

Literatur

Engineering Managerial Economic Decision and Risk Analysis: Economic Decision-Making and Risk Analysis (2021 or 2022 edition). Cotter, Teddy Steven. Springer. ISBN: 3030877663 , 9783030877668 , 3030877663 , 9783030877668 , 9783030877675 , 3030877671

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