

# Scientific Teamproject KMD

every

(in German: Wissenschaftliches Teamprojekt KMD )

**Module-ID: FIN-INF-120528**

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| <b>Abbreviation</b><br>Teamproj_KMD | <b>Credit Points</b><br>6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Semester</b><br>every | <b>Term</b><br>starting at 1. | <b>Duration</b><br>1 Semester | <b>Language</b><br>english | <b>Level</b><br>Master |
| <b>Link:</b>                        | <a href="#">LSF</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                               |                               |                            |                        |
| <b>Limited accessibility:</b>       | false                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                               |                               |                            |                        |
| <b>Responsibility:</b>              | Myra Spiliopoulou                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                               |                               |                            |                        |
| <b>Lecturer:</b>                    | Myra Spiliopoulou                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                               |                               |                            |                        |
| <b>Classes:</b>                     | Teamproj_KMD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |                               |                               |                            |                        |
| <b>Applicability in curriculum:</b> | <ul style="list-style-type: none"><li>- M.Sc. INF: Informatik</li><li>- M.Sc. INF: Schlüssel- und Methodenkompetenzen</li><li>- M.Sc. INGINF: Informatik</li><li>- M.Sc. INGINF: Schlüssel- und Methodenkompetenzen</li><li>- M.Sc. WIF: Wirtschaftsinformatik</li><li>- M.Sc. WIF: Informatik</li><li>- M.Sc. WIF: Schlüssel- und Methodenkompetenzen</li><li>- M.Sc. DKE: Applied Data Science</li><li>- M.Sc. DE: Interdisziplinäres Team-Projekt</li><li>- M.Sc. DE: Fachliche Spezialisierung</li><li>- M.Sc. DE: Digital Engineering-Projekt</li><li>- M.Sc. VC: Computer Science</li><li>- M.Sc. VC: Schlüssel- und Methodenkompetenzen</li></ul> |                          |                               |                               |                            |                        |

## Intended learning outcomes:

**When completing this module successfully, the students can:** \* solve a realistic data mining and data engineering task in teamwork \* assess the business implications (costs and benefits) of a solution they propose \* built-up a team and organize themselves in it, distributing subtasks among

themselves according to their competences, setting milestones and pursuing a joint schedule \* search for scientific papers of relevance \* search appropriate libraries for data preparation, learning and visualization \* design a learning workflow, apply AI methods and evaluate the induced models \* develop a software solution jointly, using public domain tools \* justify their design decisions and software suite selections \* present their work as a team \* write a joint report where they summarize and justify their approach

Bitte nachtragen nach neuen Constructive Alignment Vorgaben.

### Content:

**CONTENT:** Assignment in the form of a realistic task that involves the analysis of static or dynamic, structured or unstructured data with mining methods, including supervised, unsupervised and semi-supervised methods, stream miners, forecasters and elaborate AI tools. The assignment involves design, development and evaluation of a software solution in teamwork. **STRUCTURE:** The assignment is for a team of students, typically three; for larger teams, the assignment is extended to ensure that the effort of each student is 6 ECTS. The students are called to solve the task as a team. The task involves understanding a realistic problem, designing, developing and evaluating a solution for it, presenting this solution to the class, defending it and documenting it on paper.

### Workload:

For each team member: 28 h in class (including meetings) + 124 h self-study The teamproject is typically for three students. For larger teams, the assignments is extended to ensure that the effort of each team member is as above.

| Pre-examination requirements: | Type of examination:                                                                                                                                                                                                                                                                                    | Teaching method / lecture hours per week (SWS): |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
|                               | <ul style="list-style-type: none"> <li>Wissenschaftliches Projekt, implementiert als eine Hausarbeit, die ein Referat beinhaltet</li> </ul> <p><b>COURTESY TRANSLATION:</b><br/>This module implements the exam form 'Wissenschaftliches Projekt' as a 'Hausarbeit' which incorporates a 'Referat'.</p> | Wissenschaftliches Teamprojekt (2 SWS)          |

| Prerequisites according to examination regulations: | Recommended prerequisites: |
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| keine | <ul style="list-style-type: none"> <li>• Familiarity with advanced mining methods for static data and (for some assignments) for streams</li> <li>• Familiarity with software development and software libraries</li> <li>• Underpinnings of project management</li> </ul> |
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| Media: | Literature:                                                                                   |
|--------|-----------------------------------------------------------------------------------------------|
|        | Literature depends on topic assignment and is given to each team together with the assignment |

### Comments:

Als Implementierung des generischen **PFLICHTMODULS** "Wissenschaftliches Teamprojekt" entsprechend anrechenbar. **COURTESY TRANSLATION:** This module implements the **COMPULSORY** generic module 'Wissenschaftliches Teamprojekt'.

Revision #1

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