



| Course title                       | Recommender Systems  |
|------------------------------------|--|
| Institute/Division                 | Faculty of Computer Science and Mathematics/ Department of Computer Science  |
| Course code                        | F-1.RS   |
| Erasmus subject code*              | 11.3   |
| Number of contact hours**          | 45 lecture hours (45h)   |
| Course duration                    | 1 semester (Spring/Fall)   |
| ECTS credits                       | 6  |
| Course description (max 100 words) | This course offers a comprehensive introduction to recommender systems, which are essential in many domains. <ul style="list-style-type: none"><li>- Linear algebra</li><li>- Content-Based Filtering</li><li>- Collaborative Filtering: user-based nearest neighbor recommendation, item-based nearest neighbor recommendation, model-based and preprocessing-based approaches</li><li>- Matrix Factorization Techniques</li><li>- Hybrid Recommender Systems</li><li>- Session-based &amp; knowledge-based recommendation</li><li>- Evaluating recommender systems</li><li>- Deep learning for recommender systems</li></ul> |
| Literature                         | 1. Recommender Systems Handbook, Ricci F., Rokach L., Shapira D., Kantor B.P., Springer (2011).<br>2. Recommender Systems For Learning, Manouselis N., Drachler H., Verbert K., Duval E., , Springer (2013).   |
| Course type/organization           | Lectures, Computer labs, Projects  |
| Assessment method                  | Laboratories, assignments, project, exam   |
| Prerequisites                      | Python language, basic calculus and algorithms, machine learning basics  |
| Primary target group               | Computer science students in the 3rd or 4th year   |
| Contact person                     | dr inż. Mariam Zomorodi, prof. PK  |
| Course application deadline        |  |
| Remarks                            | N/A  |

\*please insert one of the following codes:

- 11.0 Mathematics, Informatics
- 11.1 Mathematics
- 11.2 Statistics
- 11.3 Informatics, Computer Science
- 11.4 Artificial Intelligence
- 11.5 Actuarial Science
- 11.9 Others Mathematics, Informatics

\*\*1 lecture hour=45 minutes