

## Master of Science Mathematical Data Science PO 2025

### Module und Prüfungen (Stand: 07. Juli 2026)

| Konto                     | Konto   Modul   Prüfung                                                                |
|---------------------------|----------------------------------------------------------------------------------------|
| 1100 Mathematics          | 1100   75663   15663 Data Lab                                                          |
| 1100 Mathematics          | 1100   70645   10645 Mathematics of Machine Learning                                   |
| 1100 Mathematics          | 1100   76034   16034 Numerical Methods for Data Science                                |
| 1100 Mathematics          | 1100   75662   15662 Practical Foundations of Data Science                             |
| 4000 Seminar              | 4000   74551   14551 Seminar Advances in Artificial Intelligence - Master              |
| 4000 Seminar              | 4000   73504   12504 Seminar Analysis - Master                                         |
| 4000 Seminar              | 4000   74149   14149 Seminar Big (Social) Data Analytics A                             |
| 4000 Seminar              | 4000   75254   15254 Seminar Empirische Studien mit R - Master                         |
| 4000 Seminar              | 4000   70504   11504 Seminar Financial Mathematics - Master                            |
| 4000 Seminar              | 4000   74570   14570 Seminar Mustererkennung - Master                                  |
| 4000 Seminar              | 4000   72887   12887 Seminar Numerik - Master                                          |
| 4000 Seminar              | 4000   73411   13411 Seminar Optimierung - Master                                      |
| 4000 Seminar              | 4000   74576   14576 Seminar Research Trends in Visual Computing - Master              |
| 4000 Seminar              | 4000   71124   11224 Seminar Spezielle Aspekte der Versicherungsmathematik - unbenotet |
| 4000 Seminar              | 4000   73615   13615 Seminar Statistik - Master                                        |
| 4000 Seminar              | 4000   75606   15606 Seminar Machine Learning                                          |
| 4000 Seminar              | 4000   75286   15286 Seminar Stochastik - Master                                       |
| 2200 Application Sciences | 2200   77083   17083 3D Deep Learning                                                  |
| 2200 Application Sciences | 2200   75347   15347 Actuarial Data Science                                            |
| 2200 Application Sciences | 2200   75206   15206 Advanced Methods in Data Mining and Machine Learning              |
| 2200 Application Sciences | 2200   70956   11266 Algorithmen zur Sequenzanalyse                                    |
| 2200 Application Sciences | 2200   71047   11487 Ausgewählte Aspekte aus Aktuarwissenschaften A                    |
| 2200 Application Sciences | 2200   74147   14147 Big Data Analytics - Methoden und Anwendungen                     |
| 2200 Application Sciences | 2200   72405   13520 Cognitive Systems I                                               |
| 2200 Application Sciences | 2200   77111   17111 Data Analytics in Life Insurance                                  |
| 2200 Application Sciences | 2200   71994   11301 Data Mining                                                       |
| 2200 Application Sciences | 2200   75249   15249 Data Science & Law                                                |
| 2200 Application Sciences | 2200   76024   16024 Deep Learning for Graphics and Visualization                      |
| 2200 Application Sciences | 2200   75691   15691 Deploying and Operationalizing AI                                 |
| 2200 Application Sciences | 2200   72003   12658 Energieökonomik                                                   |
| 2200 Application Sciences | 2200   76205   16205 Explainable Artificial Intelligence                               |
| 2200 Application Sciences | 2200   74252   14252 Foundations and Concepts of Cognitive Systems Modeling            |
| 2200 Application Sciences | 2200   75280   15280 Graph Analytics and Deep Learning                                 |
| 2200 Application Sciences | 2200   75027   15027 Introduction to Deep Learning                                     |

## Konto

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## Konto | Modul | Prüfung

|      |  |       |  |       |  |                                                              |
|------|--|-------|--|-------|--|--------------------------------------------------------------|
| 2200 |  | 75714 |  | 17003 |  | Knowledge-Based Artificial Intelligence                      |
| 2200 |  | 74212 |  | 14212 |  | Learning Systems I: Introduction to Machine Learning         |
| 2200 |  | 74258 |  | 14258 |  | Learning Systems II                                          |
| 2200 |  | 74361 |  | 14361 |  | Machine Learning and Decision Making                         |
| 2200 |  | 75192 |  | 15192 |  | Project Data Science on Very Large Data Sets                 |
| 2200 |  | 71905 |  | 13320 |  | Projekt Neuroinformatik kompakt                              |
| 2200 |  | 74586 |  | 14586 |  | Pattern Recognition                                          |
| 2200 |  | 75615 |  | 15615 |  | Project Economic Data Science                                |
| 2200 |  | 72279 |  | 13337 |  | Research in Finance                                          |
| 2200 |  | 73726 |  | 13726 |  | Risk Theory I                                                |
| 2200 |  | 73507 |  | 12507 |  | Risk Theory II                                               |
| 2200 |  | 74043 |  | 14043 |  | Social Network Analysis - Methoden, Konzepte und Anwendungen |
| 2200 |  | 71808 |  | 11416 |  | Statistische Lerntheorie                                     |
| 2200 |  | 75207 |  | 15207 |  | Text Analytics and Deep Learning                             |
| 2200 |  | 71822 |  | 10560 |  | Theorie Neuroner Netze                                       |
| 2400 |  | 77018 |  | 17018 |  | Funktionalanalysis für Data Science                          |
| 2400 |  | 70115 |  | 10765 |  | Funktionalanalysis                                           |
| 2400 |  | 72218 |  | 13120 |  | Nichtlineare Funktionalanalysis                              |
| 2100 |  | 77151 |  | 17151 |  | Elements of Advanced Graph Theory with Applications          |
| 2100 |  | 77039 |  | 17039 |  | Advanced Graph Theory with Applications                      |
| 2100 |  | 77132 |  | 17132 |  | Advanced Optimization with Applications                      |
| 2100 |  | 76657 |  | 16657 |  | Advanced Statistics                                          |
| 2100 |  | 75771 |  | 15771 |  | Advanced topics in time series analysis                      |
| 2100 |  | 75767 |  | 15767 |  | Causal Inference                                             |
| 2100 |  | 75601 |  | 15601 |  | Empirische Prozesse                                          |
| 2100 |  | 75656 |  | 15656 |  | High dimensional Statistics                                  |
| 2100 |  | 72367 |  | 13488 |  | High Performance Computing I                                 |
| 2100 |  | 77124 |  | 17124 |  | Introduction to Monte-Carlo-Simulation                       |
| 2100 |  | 72103 |  | 12804 |  | Mathematics of Games                                         |
| 2100 |  | 75603 |  | 15603 |  | Nonlinear Time Series Analysis                               |
| 2100 |  | 73740 |  | 13740 |  | Numerik elliptischer partieller Differenzialgleichungen      |
| 2100 |  | 70041 |  | 10146 |  | Numerische Optimierung                                       |
| 2100 |  | 70042 |  | 10147 |  | Numerik von gewöhnlichen Differenzialgleichungen             |
| 2100 |  | 77838 |  | 17338 |  | Point Processes                                              |
| 2100 |  | 70587 |  | 10587 |  | Random Fields                                                |
| 2100 |  | 75769 |  | 15769 |  | Stable Distributions                                         |

## Konto

2100 Mathematical Data Science  
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2300 Mathematics  
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2500 Mathematical Statistics  
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4511 Ethics and technology  
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4513 Interdisciplinary competences  
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Additive Schlüsselqualifikationen

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2100 | 75604 | 15604 Statistical Learning  
2100 | 77140 | 17140 Stochastic Simulation  
2100 | 75405 | 15405 Survival and Event History Analysis  
2100 | 75657 | 15657 Time Series Analysis  
2300 | 77120 | 17120 Discrete Time Financial Mathematics  
2300 | 75796 | 15796 Geometrische Funktionentheorie  
2300 | 75600 | 15600 Stochastic Analysis  
2300 | 70620 | 10620 Wahrscheinlichkeitstheorie und Stochastische Prozesse  
2500 | 75284 | 15284 Asymptotische Statistik  
2500 | 72818 | 10818 Mathematische Statistik  
2500 | 77086 | 17086 Spatial Statistics  
4511 | 75583 | 15583 Digitale Kulturen: Medien, Ethik und Gesellschaft  
4511 | 75322 | 15322 Einführung in die Wirtschaftsethik. Aktuelle Modelle und Entscheidungsstrategien  
4511 | 75321 | 15321 Ethik und Politik in Science and Technology Studies  
4513 | 70243 | 10987 Credit Analysis  
4513 | 74075 | 14075 Fachdidaktik Mathematik  
4513 | 74410 | 14410 Fachdidaktik Wirtschaftswissenschaften III  
4513 | 71121 | 10388 Grundlagen der Jahresabschlusserstellung  
4513 | 70194 | 10163 Mikroökonomik  
4513 | 72467 | 13592 Wettbewerbsstrategie  
| 86x00 | Leer lassen/leave blank