

| Modul | | | Modul | Form | | Prüfung | | | | 1.Sem. | | 2.Sem. | | 3.Sem. | | 4.Sem. | |
|----------|--|---|-------|-----------|------------------|---------------------------------|-----------|-----------------|------------------|--------|------|--------|------|--------|------|--------|------|
| Modulnr. | Teilmodulname | EN | | | Online asynchron | Art | Dauer | Notengewichtung | Prüfungssemester | SWS | ECTS | SWS | ECTS | SWS | ECTS | SWS | ECTS |
| KI110 | Data Science I | Data Science I | PFM | SU | | portP(Ausarb, Klausur) | 60 | 0,33 / 0,67 | 1.Sem. | 2 | 3 | | | | | | |
| | Praktikum Data Science I | Practical Training Data Science I | | PR | | prakP.sb.P | | | | | 2 | 2 | | | | | |
| KI120 | Grundlagen der Informatik | Foundations of Computer Science | PFM | SU | | Klausur | 60 | 1,00 | 1.Sem. | 4 | 5 | | | | | | |
| KI130 | Künstliche Intelligenz I | Artificial Intelligence I | PFM | SU | | Klausur | 60 | 1,00 | 1.Sem. | 3 | 4 | | | | | | |
| | Praktikum Künstliche Intelligenz I | Practical Training Artificial Intelligence I | | PR | | prakP.sb.P | | | | | 2 | 2 | | | | | |
| KI140 | Mathematik I | Mathematics I | PFM | SU | | Klausur | 60 | 1,00 | 1.Sem. | 5 | 6 | | | | | | |
| | Praktikum Mathematik I | Practical Training Mathematics I | | PR | | | | | | | 2 | 2 | | | | | |
| KI150 | Programmieren I | Programming I | PFM | SU | | portP(prakP.sb, Klausur) | 60 | 0,30 / 0,70 | 1.Sem. | 4 | 5 | | | | | | |
| | Praktikum Programmieren I | Practical Training Programming I | | PR | | prakP.sb.P | | | | | 2 | 2 | | | | | |
| SGxxx | Studium Generale (3 Kurse, jedes Sem. wählbar) | General Studies (3 courses, selectable every semester) | | Fachspez. | | Fachspez. | Fachspez. | mE/oE | 1. - 7. Sem. | | 6 | | | | | | |
| KI210 | Data Science II | Data Science II | PFM | SU | | portP(Votr.sb, Klausur) | 20 / 60 | 0,40 / 0,60 | 2.Sem. | | | 2 | 3 | | | | |
| | Praktikum Data Science II | Practical Training Data Science II | | PR | | | | | | | | 2 | 2 | | | | |
| KI220 | Mathematik II | Mathematics II | PFM | SU | | Klausur | 90 | 1,00 | 2.Sem. | | | 4 | 5 | | | | |
| | Praktikum zu Mathematik II | Practical Training Mathematics II | | PR | | | | | | | | 2 | 2 | | | | |
| KI230 | Programmieren II | Programming II | PFM | SU | | Klausur | 90 | 1,00 | 2.Sem. | | | 4 | 5 | | | | |
| | Praktikum Programmieren II | Practical Training Programming II | | PR | | prakP.sb.P | | | | | | 2 | 2 | | | | |
| KI240 | Praxisgrundlagen der Informatik | Practical Fundamentals of Computer Science | PFM | SU | | Klausur | 60 | 1,00 | 2.Sem. | | | 2 | 3 | | | | |
| | Praktikum Praxisgrundlagen der Informatik | Practical Training Practical Fundamentals of Computer Science | | PR | | prakP.sb.P | | | | | | 2 | 2 | | | | |
| KI250 | Statistik | Statistics | PFM | SU | | Klausur | 60 | 1,00 | 2.Sem. | | | 3 | 4 | | | | |
| | Praktikum Statistik | Practical Training Statistics | | PR | | | | | | | | 1 | 1 | | | | |
| KI310 | Bildverarbeitung | Image Processing | PFM | SU | | Klausur | 60 | 1,00 | 3.Sem. | | | | | 2 | 3 | | |
| | Praktikum Bildverarbeitung | Practical Training Image Processing | | PR | | prakP.sb.P | | | | | | | | 2 | 2 | | |
| KI320 | Datenbanken | Database Systems | PFM | SU | | Klausur | 90 | 1,00 | 3.Sem. | | | | | 2 | 3 | | |
| | Praktikum Datenbanken | Practical Training Database Systems | | PR | | prakP.sb.P | | | | | | | | 2 | 2 | | |
| KI330 | Ethik der KI | AI Ethics | PFM | SU | | portP(Klausur, Votr.sb, Ausarb) | 60 / 30 | 0,50 / 0,50 | 3.Sem. | | | | | 2 | 3 | | |
| | Praktikum Ethik der KI | Practical Training AI Ethics | | PR | | | | | | | | | | 2 | 2 | | |
| KI340 | IT-Sicherheit | IT-Security | PFM | SU | | Klausur | 90 | 1,00 | 3.Sem. | | | | | 2 | 3 | | |
| | Praktikum IT-Sicherheit | Practical Training IT-Security | | PR | | | | | | | | | | 2 | 2 | | |

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|----------|---|---|-------|------|------------------|---------------------------|---------|-----------------|------------------|--------|------|--------|------|--------|------|--------|------|
| Modulnr. | Teilmodulname | EN | | | Online asynchron | Art | Dauer | Notengewichtung | Prüfungssemester | SWS | ECTS | SWS | ECTS | SWS | ECTS | SWS | ECTS |
| KI350 | Machine Learning I | Machine Learning I | PFM | SU | | portP(prakP.sb, Klausur) | 60 | 0,33 / 0,67 | 3.Sem. | | | | | 4 | 4 | | |
| | Praktikum Machine Learning I | Practical Training Machine Learning I | | PR | | | | | | | | | | | 2 | 2 | |
| KI360 | Optimierung | Optimization | PFM | SU | | Klausur | 60 | 1,00 | 3.Sem. | | | | | 2 | 3 | | |
| | Praktikum Optimierung | Practical Training Optimization | | PR | | | | | | | | | | | 2 | 2 | |
| KI410 | Algorithmen und Datenstrukturen | Algorithms and Data Structures | PFM | SU | | Klausur | 60 | 1,00 | 4.Sem. | | | | | | | 2 | 3 |
| | Praktikum Algorithmen und Datenstrukturen | Practical Training Algorithms and Data Structures | | PR | | | | | | | | | | | | | 2 |
| KI420 | Software Engineering I | Software Engineering I | PFM | SU | | Klausur | 90 | 1,00 | 4.Sem. | | | | | | | 2 | 3 |
| | Praktikum Software Engineering I | Practical Training Software Engineering I | | Ü | | | | | | | | | | | | | 2 |
| KI430 | Natural Language Processing | Natural Language Processing | PFM | SU | | portP(prakP.sb, Klausur) | 45 / 60 | 0,30 / 0,70 | 4.Sem. | | | | | | | 4 | 5 |
| | Praktikum Natural Language Processing | Practical Training Natural Language Processing | | PR | | | | | | | | | | | | | 2 |
| KI440 | Machine Learning II ¹ | Machine Learning II | PFM | SU | | Klausur | 60 | 1,00 | 4.Sem. | | | | | | | 4 | 6 |
| | Praktikum Machine Learning II | Practical Training Machine Learning II | | PR | | | | | | | | | | | | | 2 |
| KI450 | Künstliche Intelligenz II | Artificial Intelligence II | PFM | SU | | Klausur | 60 | 1,00 | 4.Sem. | | | | | | | 2 | 3 |
| | Praktikum Künstliche Intelligenz II | Practical Training Artificial Intelligence II | | PR | | | | | | | | | | | | | 2 |

| Modul | | | Modul | Form | | Prüfung | | | | 5.Sem. | | 6.Sem. | | 7.Sem. | | | |
|----------|---------------------------------------|--|-------|------|------------------|---------------------------|---------|-----------------|---------------------|--------|------|--------|------|--------|------|-----|------|
| Modulnr. | Teilmodulname | EN | | | Online asynchron | Art | Dauer | Notengewichtung | Prüfungssemester | SWS | ECTS | SWS | ECTS | SWS | ECTS | SWS | ECTS |
| KI510 | Praktische Zeit im Betrieb | Internship | PFM | PR | | Ausarb | | 1,00 | 5.Sem. ² | | 22 | | | | | | |
| KI520 | Praxisseminar | Internship Seminar | PFM | S | | portP(Vortr.sb, Ausarb) | 15-45 | 1,00 | 5.Sem. ³ | 2 | 3 | | | | | | |
| KI530 | Grundlagen modernes Projektmanagement | Foundations of Modern Project Management | PFM | SU | | Klausur | 60 | 1,00 | 5.Sem. | 2 | 3 | | | | | | |
| KI610 | Big Data Algorithms ⁴ | Big Data Algorithms | PFM | SU | | Klausur | 60 | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Big Data Algorithms | Practical Training Big Data Algorithms | | PR | | | | | | | | | 2 | 2 | | | |
| KI620 | Machine Learning III | Machine Learning III | PFM | SU | | portP(prakP.sb, Klausur) | 45 / 60 | 0,33 / 0,67 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Machine Learning III | Practical Training Machine Learning III | | PR | | | | | | | | | 2 | 2 | | | |

¹Das Modul wird in englischer Sprache angeboten.

²Erfolgreiches Bestehen aller Prüfungen der ersten beiden Studiensemester.

³Erfolgreiches Bestehen aller Prüfungen des ersten Studienabschnitts. KI510 Muss parallel zu KI520 belegt werden oder bereits abgeleistet sein.

⁴Das Modul wird in englischer Sprache angeboten.

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|----------|---|--|-------|-------------|------------------|-------------------------|--|-----------------|------------------|--------|------|--------|------|--------|------|-----|------|
| Modulnr. | Teilmodulname | EN | | | Online asynchron | Art | Dauer | Notengewichtung | Prüfungssemester | SWS | ECTS | SWS | ECTS | SWS | ECTS | SWS | ECTS |
| KI630 | Praxisorientiertes Studienprojekt | Study project | PFM | StA, Ausarb | | portP(Votr.sb, Ausarb) | 30 | 1,00 | 6.Sem. | | | 4 | 5 | | | | |
| KI640 | Seminar | Seminar | PFM | S | | portP(Votr.sb, Ausarb) | 60 | 0,80 / 0,20 | 6.Sem. | | | 2 | 3 | | | | |
| AIF630 | Autonome Fahrzeuge | Autonomous Vehicles | WPFM | SU | | Klausur | 60 | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Autonome Fahrzeuge | Practical Autonomous Vehicles | | PR | | | | | | | | | 2 | 2 | | | |
| IB762 | Concepts of Modern Programming Languages | Concepts of Modern Programming Languages | WPFM | SU | | Klausur | 60 | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Concepts of Modern Programming Languages | Practical Concepts of Modern Programming Languages | | PR | | | | | | | | | 2 | 2 | | | |
| KI630 | Produktions- und Servicelogistik | Production and Service Logistics | WPFM | SU | | portP(Ausarb, Votr.sb) | 6-12 Seiten / 60 Minuten | 0,50 / 0,50 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Produktions- und Servicelogistik | Practical Production and Service Logistics | | PR | | | | | | | | | 2 | 2 | | | |
| DVM230 | Open Government and Open Data | Open Government and Open Data | WPFM | SU | | Ausarb(StA) | - | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Open Government and Open Data | Practical Open Government and Open Data | | PR | | | | | | | | | 2 | 2 | | | |
| KI650 | Biomedizinische Projektarbeit | Biomedical Projects | WPFM | StA, Ausarb | | portP(Ausarb, Votr.sb) | 10 Seiten u. wiss. Poster / 10 Minuten | 0,90 / 0,10 | 6.Sem. | | | 4 | 5 | | | | |
| IB764 | Internet of Things | Internet of Things | WPFM | SU | | Klausur | 60 | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Internet of Things | Practical Internet of Things | | PR | | | | | | | | | 2 | 2 | | | |
| KI670 | Quantencomputing | Quantencomputing | WPFM | SU | | Klausur | 60 | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Quantencomputing | Practical Quantencomputing | | PR | | | | | | | | | 2 | 2 | | | |
| KI680 | Innovative Kundenkommunikation anhand von Chatbots | Innovative Customer Communication using Chatbots | WPFM | SU | | portP(Ausarb, Votr.sb) | 45 | 0,70 / 0,30 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Innovative Kundenkommunikation mit Chatbots | Practical Innovative Customer Communication using Chatbots | | PR | | | | | | | | | 2 | 2 | | | |
| WIF727 | Bias Mitigation | Bias Mitigation | WPFM | SU | | Klausur | 60 | 1,00 | 6.Sem. | | | 2 | 3 | | | | |
| | Praktikum Bias Mitigation | Practical Bias Mitigation | | PR | | | | | | | | | 2 | 2 | | | |
| KI710 | Bachelorarbeit | Bachelor thesis | PFM | | | Ausarb | | | | | | | | | | 12 | |
| IB765 | Innovationslabor | Innovation Lab | WPFM | SU | | portP(Ausarb, Votr.sb) | 6-12 Seiten / 60 Minuten | 0,50 / 0,50 | 7.Sem. | | | | | 4 | 5 | | |
| KI720 | Machine Learning in the Cloud | Machine Learning in the Cloud | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | | 2 | 3 | |
| | Praktikum Machine Learning in the Cloud | Practical Machine Learning in the Cloud | | PR | | | | | | | | | | | | 2 | 2 |
| KI730 | Industrierobotik | Industrial Robotics | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | | 2 | 3 | |
| | Praktikum Industrierobotik | Practical Industrial Robotics | | PR | | | | | | | | | | | | 2 | 2 |

| Modul | | | Modul | Form | | Prüfung | | | | 5.Sem. | | 6.Sem. | | 7.Sem. | | | |
|----------|--|--|-------|------|---------------------|--|---------|----------------------|-----------------------|--------|------|--------|------|--------|------|-----|------|
| Modulnr. | Teilmodulname | EN | | | Online asynchron | Art | Dauer | Noten- gewichtung | Prüfungs- semester | SWS | ECTS | SWS | ECTS | SWS | ECTS | SWS | ECTS |
| KI740 | Reinforcement Learning | Reinforcement Learning | WPFM | SU | | portP(prakP.sb, Klausur) | 45 / 60 | 0,33 / 0,67 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum Reinforcement Learning | Practical Reinforcement Learning | | PR | | | | | | | | | | | 2 | 2 | |
| IB315 | Programmieren III | Programming III | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum Programmieren III | Practical Programming III | | PR | | | | | | | | | | | 2 | 2 | |
| IB605 | Numerik | Numerics | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum Numerik | Practical Numerics | | PR | | | | | | | | | | | 2 | 2 | |
| KI770 | Time Series Analysis | Time Series Analysis | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum Time Series Analysis | Practical Time Series Analysis | | PR | | | | | | | | | | | 2 | 2 | |
| IB770 | IT-Sicherheit II | IT-Security II | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum IT-Sicherheit II | Practical IT-Security II | | PR | | | | | | | | | | | 2 | 2 | |
| KI790 | 3D Game Engines | 3D Game Engines | WPFM | SU | | Klausur | 60 | 1,00 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum 3D Game Engines | Practical 3D Game Engines | | PR | | | | | | | | | | | 2 | 2 | |
| KI791 | AI-Entrepreneurship (Y Combinator Style) | AI-Entrepreneurship (Y Combinator Style) | WPFM | SU | | portP(Vortr.sb, Ausarb) | 60 | 0,50 / 0,50 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum AI-Entrepreneurship (Y Combinator Style) | Practical AI-Entrepreneurship (Y Combinator Style) | | PR | | | | | | | | | | | 2 | 2 | |
| WIF726 | AI Applications in Business Informatics | AI Applications in Business Informatics | WPFM | SU | | portP(Vortr.sb, Ausarb, Klausur) | 20 / 60 | 0,40 / 0,60 | 7.Sem. | | | | | 2 | 3 | | |
| | Praktikum AI Applications in Business Informatics | Practical AI Applications in Business Informatics | | PR | | | | | | | | | | | 2 | 2 | |

Prüfungsformen:

| | |
|-----------------|---|
| Ausarb | Ausarbeitung, semesterbegleitend, ohne Aufsicht |
| Klausur | Schriftliche Prüfung, im Prüfungszeitraum, mit Aufsicht |
| prakP.sb.P | Praktische Prüfung, semesterbegleitend, mit/ohne Erfolg |
| prakP.sb | Praktische Prüfung, semesterbegleitend, benotet |
| mdlPr | Mündliche Prüfung, im Prüfungszeitraum |
| portP(..., ...) | Portfolioprüfung, bestehend aus den Prüfungen in Klammern |
| prakP.PZ | Praktische Prüfung, im Prüfungszeitraum |
| Votr.sb | Vortrag/mündliche Prüfung, semesterbegleitend |

Allgemeine Abkürzungen:

| | |
|-----------|---|
| BL | Freiwillige Bonusleistung |
| ECTS | Punkte nach dem European Credit Transfer System |
| Fachspez. | Fachspezifisch |
| MP | Modulprüfung |
| PFM | Pflichtmodul |
| PR | Praktikum |
| S | Seminar |
| SU | Seminaristischer Unterricht |
| StA | Studienarbeit |
| Ü | Übung |
| WPFM | Fachspezifisches Wahlpflichtmodul |
| ZV | Zulassungsvoraussetzung |