

# Vorlesungsverzeichnis

Master of Science - Data Science  
Prüfungsversion Wintersemester 2018/19

Wintersemester 2023/24

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# Abkürzungsverzeichnis

## Veranstaltungsarten

|    |                         |
|----|-------------------------|
| AG | Arbeitsgruppe           |
| B  | Blockveranstaltung      |
| BL | Blockseminar            |
| DF | diverse Formen          |
| EX | Exkursion               |
| FP | Forschungspraktikum     |
| FS | Forschungsseminar       |
| FU | Fortgeschrittenenübung  |
| GK | Grundkurs               |
| HS | Hauptseminar            |
| KL | Kolloquium              |
| KU | Kurs                    |
| LK | Lektürekurs             |
| LP | Lehrforschungsprojekt   |
| OS | Oberseminar             |
| P  | Projektseminar          |
| PJ | Projekt                 |
| PR | Praktikum               |
| PS | Proseminar              |
| PU | Praktische Übung        |
| RE | Repetitorium            |
| RV | Ringvorlesung           |
| S  | Seminar                 |
| S1 | Seminar/Praktikum       |
| S2 | Seminar/Projekt         |
| S3 | Schulpraktische Studien |
| S4 | Schulpraktische Übungen |
| SK | Seminar/Kolloquium      |
| SU | Seminar/Übung           |
| TU | Tutorium                |
| U  | Übung                   |
| UN | Unterricht              |
| UP | Praktikum/Übung         |
| UT | Übung / Tutorium        |
| V  | Vorlesung               |
| V5 | Vorlesung/Projekt       |
| VP | Vorlesung/Praktikum     |
| VS | Vorlesung/Seminar       |
| VU | Vorlesung/Übung         |
| W  | Werkstatt               |
| WS | Workshop                |

BlockSaSo Block (inkl. Sa,So)

## Andere

|                                                                                   |                             |
|-----------------------------------------------------------------------------------|-----------------------------|
| N.N.                                                                              | Noch keine Angaben          |
| n.V.                                                                              | Nach Vereinbarung           |
| LP                                                                                | Leistungspunkte             |
| SWS                                                                               | Semesterwochenstunden       |
|  | Belegung über PULS          |
|  | Prüfungsleistung            |
|  | Prüfungsnebenleistung       |
|  | Studienleistung             |
|  | sonstige Leistungserfassung |

## Veranstaltungsrhythmen

|         |                  |
|---------|------------------|
| wöch.   | wöchentlich      |
| 14t.    | 14-täglich       |
| Einzel  | Einzeltermin     |
| Block   | Block            |
| BlockSa | Block (inkl. Sa) |

# Vorlesungsverzeichnis

## Bridge Modules

### FM2 - Foundations of Computer Science

#### 104286 U - Grundlagen der Informatik

| Gruppe | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft           |
|--------|-----|------|---------------|----------|-------------------|------------|---------------------|
| 1      | U   | Do   | 16:00 - 18:00 | wöch.    | 2.70.0.10         | 19.10.2023 | Dr. Henning Bordihn |
| 1      | V   | N.N. | N.N.          | wöch.    | N.N.              | N.N.       | Dr. Henning Bordihn |

Raum und Zeit nach Absprache

#### Kommentar

The content is taught with the help of appropriate video lectures as they can be found, e.g., on Coursera, Stanford Online or MIT OpenCourseWare.

The meetings in presence are used for discussing questions and assignments.

#### Leistungsnachweis

oral exam, 20-30 minutes

#### Lerninhalte

Algorithms and Data Structures: Growth of functions and O-notation; Divide and conquer; Dynamic Programming; Sorting and searching; Elementary data structures; Elementary algorithms on graphs

Formal Languages: Regular languages and finite automata; Context-free languages and pushdown automata; Recursively enumerable languages and Turing machines

Theoretical Foundations: Decidability and computability; Halting problem; Non-determinism; Complexity classes P and NP; Rekursion; Inductive definitions

#### Zielgruppe

Master Students in Cognitive Systems or Data Science with bridging module in CS

#### Leistungen in Bezug auf das Modul

**PNL** 556012 - Übung (unbenotet)

### MAT-DSBM1 - Foundations of Stochastics

#### 104672 VU - Foundations of Stochastics

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft       |
|--------|-----|-----|---------------|----------|-------------------|------------|-----------------|
| 1      | V   | Mo  | 14:15 - 15:45 | wöch.    | 2.09.0.14         | 16.10.2023 | Dr. Tomas Kocak |
| 1      | U   | Do  | 12:15 - 13:45 | wöch.    | 2.09.1.10         | 19.10.2023 | Dr. Tomas Kocak |
| 1      | V   | Fr  | 10:15 - 11:45 | wöch.    | 2.09.0.14         | 20.10.2023 | Dr. Tomas Kocak |

#### Kommentar

Please, switch to English for the lecture description.

**Leistungen in Bezug auf das Modul**

PNL 551252 - Übung oder inverted classroom (unbenotet)

## Compulsory Modules

**MATVMD837 - Statistical Data Analysis** **104668 VU - Statistical Data Analysis**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft    |
|--------|-----|-----|---------------|----------|-------------------|------------|--------------|
| Alle   | V   | Di  | 16:15 - 17:45 | wöch.    | 2.25.F1.01        | 17.10.2023 | Dr. Tim Jahn |
| Alle   | V   | Mi  | 08:15 - 09:45 | wöch.    | 2.28.0.108        | 18.10.2023 | Dr. Tim Jahn |
| 1      | U   | Do  | 14:15 - 15:45 | wöch.    | 2.09.0.14         | 19.10.2023 | Dr. Tim Jahn |
| 2      | U   | Do  | 08:15 - 09:45 | wöch.    | 2.09.0.13         | 19.10.2023 | Dr. Tim Jahn |

**Leistungen in Bezug auf das Modul**

PNL 517311 - Vertiefende Vorlesung im Bereich Statistische Datenanalyse und Übung (unbenotet)

**MATVMD838 - Bayesian Inference and Data Assimilation**

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

**INF-DS-C1 - Machine Learning** **104287 VU - Maschinelles Lernen & Intelligente Datenanalyse II**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                 |
|--------|-----|-----|---------------|----------|-------------------|------------|---------------------------|
| Alle   | V   | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| Alle   | V   | Mo  | 12:00 - 14:00 | Einzel   | Online.Veranstalt | 20.11.2023 | Prof. Dr. Tobias Scheffer |
| 1      | U   | Mo  | 14:00 - 16:00 | wöch.    | 2.70.0.09         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| 2      | U   | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 17.10.2023 | Prof. Dr. Tobias Scheffer |
| 3      | U   | Mi  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 18.10.2023 | Prof. Dr. Tobias Scheffer |

**Kommentar**

Aufbauend auf der Vorlesung Intelligente Datenanalyse beschäftigt sich die Veranstaltung vertiefend mit Algorithmen, die aus Daten lernen können. Algorithmen des maschinellen Lernens gewinnen aus Daten Modelle, mit denen sich dann Vorhersagen über das beobachtete System treffen lassen. Anwendungen für Datenanalyse-Verfahren erstrecken sich von der Vorhersage von Kreditrisiken über die Auswertung astronomischer Daten bis zu persönlichen Musikempfehlungen. Die Veranstaltung setzt sich aus einem Vorlesungs- und einem Projektteil zusammen. Der Vorlesungsteil vermittelt das notwendige Wissen über Datenanalyse sowie über Matlab. Im Projektteil werden anwendungsnahe Aufgaben eigenständig bearbeitet.

**Voraussetzung**

Intelligente Datenanalyse

**Leistungsnachweis**

Projektaufgabe und mündliche Prüfung

**Leistungen in Bezug auf das Modul**

PNL 557103 - Laborübung (unbenotet)

**INF-DS-C2 - Data Infrastructures and Software Engineering** **103774 DF - Introduction to databases and practical programming**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft        |
|--------|-----|-----|---------------|----------|-------------------|------------|------------------|
| 1      | V   | Fr  | 08:15 - 09:15 | wöch.    | 2.70.0.01         | 20.10.2023 | Dr. Detlef Groth |
| 1      | SU  | Fr  | 09:45 - 11:45 | wöch.    | 2.70.0.01         | 20.10.2023 | Dr. Detlef Groth |

#### Kommentar

Dear students,  
for those students which does not yet have the Moodle course link, here it is:  
<https://moodle2.uni-potsdam.de/course/view.php?id=39233>

The course key is:  
Golm2324X

There will be a parallel Zoom session mainly for students not yet in Germany or in case you are not fit. Here is the Zoom link:  
<https://uni-potsdam.zoom.us/j/94438873701> (Password: 21955051) Fri 08:15-11:45  
Detlef Groth

#### Leistungen in Bezug auf das Modul

PNL 557115 - Übung oder Projekt (unbenotet)

#### INF-DS-C3 - Data Science and Business Analytics

##### 104815 VU - Data Science

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                             |
|--------|-----|-----|---------------|----------|-------------------|------------|-------------------------------------------------------|
| 1      | V   | Mi  | 16:00 - 18:00 | wöch.    | Online.Veranstalt | 25.10.2023 | Dr. Katharina Baum, Dr. Annika Baumann, Georg Voronin |
| 1      | U   | Mi  | 12:00 - 14:00 | wöch.    | Online.Veranstalt | 01.11.2023 | Dr. Katharina Baum, Dr. Annika Baumann, Georg Voronin |

### Bemerkung

Data is increasingly seen as a driving force behind many industries, from data-driven start-ups to traditional manufacturing companies. Recent years have been marked by the hype around big data technologies and the implications that go along with them. In response to these developments, data science has become one of the most demanded specializations. Against this background, this class will introduce students to the fundamentals of data science, using Python programming language as a basis.

**Please be aware that the lecture will start on October, 25th and the exercises will start on November, 8th.**

#### Zoom Link to the lecture :

<https://uni-potsdam.zoom.us/j/66559845347>

Meeting ID: 665 5984 5347

Passcode: 89075209

#### Zoom Link to the exercise :

<https://uni-potsdam.zoom.us/j/67518096020>

Meeting ID: 675 1809 6020

#### Exam Dates:

- Date 1: 29.02.2024, 12:00 - 14:00 Uhr
- Be there at 11:45 for the ID check!
- 3.06.H01

- Date 2: 18.03.2024, 10:00 - 12:00 Uhr
- Be there at 09:45 for the ID check!
- 3.01.H10

More information can be found on the [Moodle](#) page.

### Leistungen in Bezug auf das Modul

**PNL** 557121 - Vorlesung und Laborübung (unbenotet)

### INF-DS-C4 - Applied Data Science

#### 102087 VU - Remote Sensing of the Environment

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                               |
|--------|-----|-----|---------------|----------|-------------------|------------|-----------------------------------------|
| 1      | V   | Mo  | 12:30 - 14:00 | wöch.    | 2.27.1.10         | 16.10.2023 | Prof. Dr. Bodo Bookhagen, Manudeo Singh |
| 1      | U   | Fr  | 14:15 - 15:45 | wöch.    | 2.27.1.10         | 20.10.2023 | Prof. Dr. Bodo Bookhagen, Manudeo Singh |

### Leistungen in Bezug auf das Modul

**PNL** 557132 - Übung oder Projekt (unbenotet)

| 102583 U - Advanced Natural Language Processing                                                                                                             |                                         |     |               |          |                   |            |                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----|---------------|----------|-------------------|------------|------------------------------------|
| Gruppe                                                                                                                                                      | Art                                     | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                          |
| 1                                                                                                                                                           | U                                       | Mo  | 10:00 - 12:00 | wöch.    | 2.14.0.21         | 16.10.2023 | Prof. Dr. David Schlangen, Meng Li |
| <b>Kommentar</b>                                                                                                                                            |                                         |     |               |          |                   |            |                                    |
| Please note that the Übung will start in week 2 (Monday Oct 23rd). In week 1 (Oct 16th), there will be the general CogSys welcome meeting during this time. |                                         |     |               |          |                   |            |                                    |
| <b>Leistungen in Bezug auf das Modul</b>                                                                                                                    |                                         |     |               |          |                   |            |                                    |
| PNL                                                                                                                                                         | 557132 - Übung oder Projekt (unbenotet) |     |               |          |                   |            |                                    |

| 102584 V - Advanced Natural Language Processing |                                             |     |               |          |                   |            |                                    |
|-------------------------------------------------|---------------------------------------------|-----|---------------|----------|-------------------|------------|------------------------------------|
| Gruppe                                          | Art                                         | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                          |
| 1                                               | V                                           | Do  | 10:00 - 12:00 | wöch.    | 2.14.2.22         | 19.10.2023 | Prof. Dr. David Schlangen, Meng Li |
| <b>Leistungen in Bezug auf das Modul</b>        |                                             |     |               |          |                   |            |                                    |
| SL                                              | 557131 - Vorlesung oder Seminar (unbenotet) |     |               |          |                   |            |                                    |

| 103383 VU - Bioinformatik biologischer Sequenzen / Evolutionary Genomics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                         |     |               |          |                   |            |                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----|---------------|----------|-------------------|------------|-----------------------|
| Gruppe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Art                                     | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft             |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | V                                       | Di  | 08:15 - 09:45 | wöch.    | 2.25.F1.01        | 17.10.2023 | Dr. Stefanie Hartmann |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | U                                       | Di  | 10:15 - 11:45 | wöch.    | 2.70.0.01         | 17.10.2023 | Dr. Stefanie Hartmann |
| <b>Kommentar</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |     |               |          |                   |            |                       |
| <p>This course does not have an online option, you will need to be present for the lectures and computer labs.</p> <p>For the computer labs of this course, you will need an account on the university's HPC cluster. This account is tied to your university account, so you can only apply for the cluster account once you are enrolled and have your university ID. Please generate and activate your ssh key-pair as described here: <a href="https://docs.hpc.uni-potsdam.de/overview/getting_access.html">https://docs.hpc.uni-potsdam.de/overview/getting_access.html</a> (Note: this site is only available from within the university's network. From anywhere and to get started, see <a href="https://www.uni-potsdam.de/de/zim/angebote-loesungen/hpc">https://www.uni-potsdam.de/de/zim/angebote-loesungen/hpc</a> )</p> <p>Copy the key-pair to a USB flash drive and bring it to the first computer lab. Note: the USB drive with your ssh keys, the folder(s) in which you're storing them, and the files of the keys should not have spaces in them. Special symbols and umlauts are a bad idea as well. Please rename files and folders accordingly.</p> |                                         |     |               |          |                   |            |                       |
| <b>Leistungen in Bezug auf das Modul</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                         |     |               |          |                   |            |                       |
| PNL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 557132 - Übung oder Projekt (unbenotet) |     |               |          |                   |            |                       |

| 103559 B - Analysis of high-throughput sequencing data |     |      |               |          |                   |            |                      |
|--------------------------------------------------------|-----|------|---------------|----------|-------------------|------------|----------------------|
| Gruppe                                                 | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft            |
| 1                                                      | B   | N.N. | 09:00 - 17:00 | Block    | 2.25.D2.01        | 26.02.2024 | Dr. Christian Kappel |
| 1                                                      | B   | N.N. | 09:00 - 17:00 | Block    | 2.25.D2.02        | 26.02.2024 | Dr. Christian Kappel |

**Bemerkung**

This is a block course mixing lectures and hands-on work (exercises). It will most likely take place from **26 February to 8 March 2024**, 9 am to 5 pm. It will be in hybrid form, in the computer pools D2.01 und D2.02 in house 25 (Potsdam Golm) and Online via Zoom (Meeting ID: 686 6154 6081, Passcode: 06444769).

There will be three information/discussion meetings via Zoom (Meeting ID: 686 6154 6081, Passcode: 06444769), feel free to join them.

- 4 October 2023, 12 to 1 pm
- 16 October 2023, 12 to 1 pm
- 6 November 2023, 12 to 1 pm

Those meetings are not mandatory, you may join any time. If you cannot make it and would like to have another one, please contact the lecturer (see below).

[2023-11-06] If you are interested in attending an additional meeting before the enrollment period closes this week, please indicate your availability by filling out the poll at the following link: <https://doodle.com/meeting/participate/id/aznNBAYa>

**[2023-11-07] There will be two other Zoom meetings: the first one is today, November 7, at 8:15 pm. The second one is on Friday, November 10, at 1 pm. Meeting ID: 686 6154 6081, Passcode: 06444769**

If you choose to participate Online, you will just need to have access to a simple PC for the time of the course. The only thing you need is a Web Browser and a Linux Terminal. In Windows you may use tools like Putty (<https://www.putty.org/>) or MobaXTerm (<https://mobaxterm.mobatek.net/download.html>, Home Edition). Some prior knowledge about the Linux Terminal may be helpful also, you can find a good starter here: <http://swcarpentry.github.io/shell-novice/>.

You should have some knowledge about biology to get most out of this course. Also attending the [Evolutionary Genomics](#) course taught by Stefanie Hartmann may be a very good option in every case.

You may find a rough description of the course in the Bioinformatics module guide, BIO-MBIW08 ( [https://www.uni-potsdam.de/fileadmin01/projects/mnfakul/Dokumente\\_und\\_%C3%9Cbersichten/Studium\\_und\\_Lehre/Module\\_Guide\\_Bioinformatics\\_EN.pdf](https://www.uni-potsdam.de/fileadmin01/projects/mnfakul/Dokumente_und_%C3%9Cbersichten/Studium_und_Lehre/Module_Guide_Bioinformatics_EN.pdf) ).

There is a Moodle page for this course: HTS2024, <https://moodle2.uni-potsdam.de/course/view.php?id=38040>.

Please contact [christian.kappel@uni-potsdam.de](mailto:christian.kappel@uni-potsdam.de) for any question or if you need some special arrangements.

**Leistungen in Bezug auf das Modul**

**PNL** 557132 - Übung oder Projekt (unbenotet)

| 104320 VU - Declarative Problem Solving and Optimization |     |      |               |          |                   |            |                                                                           |
|----------------------------------------------------------|-----|------|---------------|----------|-------------------|------------|---------------------------------------------------------------------------|
| Gruppe                                                   | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                 |
| 1                                                        | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.10         | 20.10.2023 | Prof. Dr. Torsten Schaub                                                  |
| 1                                                        | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.11         | 03.11.2023 | Prof. Dr. Torsten Schaub                                                  |
| 1                                                        | U   | N.N. | N.N.          | wöch.    | N.N.              | N.N.       | Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub |

Times and Dates will be announced by the lecturer.

| Kommentar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |     |               |          |                   |            |                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|---------------|----------|-------------------|------------|----------------------------------------------|
| <p>Answer Set Programming (ASP) is a prime approach to declarative problem solving. Although initially tailored to modeling problems in the area of Knowledge Representation and Reasoning (KRR), its attractive combination of a rich yet simple modeling language with high-performance solving capacities has sparked interests in academia and industry way beyond KRR. This course presents a detailed introduction to ASP, aiming at using ASP languages and systems for solving application problems. Starting from the essential formal foundations, it introduces ASP's solving technology, modeling language and methodology, while illustrating the overall solving process by practical examples.</p> |     |     |               |          |                   |            |                                              |
| Voraussetzung                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |     |               |          |                   |            |                                              |
| Motivation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |     |               |          |                   |            |                                              |
| Literatur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |     |               |          |                   |            |                                              |
| <ul style="list-style-type: none"> <li>• Answer Set Solving in Practice by Martin Gebser, Roland Kaminski, Benjamin Kaufmann, and Torsten Schaub. Synthesis Lectures on Artificial Intelligence and Machine Learning, Morgan and Claypool</li> <li>• Potassco User Guide by the Potassco team, <a href="https://github.com/potassco/guide/releases">https://github.com/potassco/guide/releases</a></li> <li>• Answer Set Programming by Vladimir Lifschitz. Springer</li> <li>• Knowledge Representation, Reasoning, and the Design of Intelligent Agents: The Answer-Set Programming Approach by Michael Gelfond and Yulia Kahl. Cambridge University Press</li> </ul>                                           |     |     |               |          |                   |            |                                              |
| Leistungsnachweis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |     |               |          |                   |            |                                              |
| Marked exam and assignments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |     |               |          |                   |            |                                              |
| Bemerkung                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |     |               |          |                   |            |                                              |
| <p>Offline communication is conducted primarily via the associated moodle page.</p> <p>Announcements are also made through the email list of registered students in puls.</p> <p>Questions can be addressed to <a href="mailto:asp@lists.cs.uni-potsdam.de">asp@lists.cs.uni-potsdam.de</a></p> <p>A tutorial introduction to answer set programming, used in the projects, is given separately.</p>                                                                                                                                                                                                                                                                                                              |     |     |               |          |                   |            |                                              |
| Lerninhalte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |     |               |          |                   |            |                                              |
| <ul style="list-style-type: none"> <li>• Motivation</li> <li>• Introduction</li> <li>• Modeling</li> <li>• Language</li> <li>• Grounding</li> <li>• Foundations</li> <li>• Solving</li> <li>• Advanced modeling</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |               |          |                   |            |                                              |
| Kurzkommentar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |     |               |          |                   |            |                                              |
| We start on Friday 20th of October at 12:00. More information about the course can be found at <a href="#">Moodle</a> . - cu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |     |               |          |                   |            |                                              |
| Zielgruppe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |               |          |                   |            |                                              |
| This is an introductory lecture for MSc students with varying backgrounds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |               |          |                   |            |                                              |
| Leistungen in Bezug auf das Modul                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |     |               |          |                   |            |                                              |
| PNL 557132 - Übung oder Projekt (unbenotet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |     |               |          |                   |            |                                              |
| 104331 DF - Knowledge-Based Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |     |               |          |                   |            |                                              |
| Gruppe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | VU  | Mo  | 16:00 - 18:00 | wöch.    | 2.70.0.08         | 16.10.2023 | Prof. Dr. Torsten Schaub, Balázs Amadé Nemes |

## Kommentar

A Configuration task requires us assemble an artifact from instances of a fixed set of well component types which can be composed conforming to a set of constraints. In this course, students will familiarize themselves with the literature on solving configuration tasks using knowledge-based approaches.

The course organization happens via the [course moodle page](#).

## Leistungen in Bezug auf das Modul

PNL 557132 - Übung oder Projekt (unbenotet)

## 104455 S - Digital technology for management and society

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft     |
|--------|-----|-----|---------------|----------|-------------------|------------|---------------|
| 1      | S   | Di  | 14:00 - 16:00 | wöch.    | 3.06.S16          | 17.10.2023 | Olga Abramova |

## Kommentar

Dear students,

Please self-enroll

**Moodle Course:** Digital technology for management and society Seminar WS 2023 ( [DTMS\\_WS2023](#) ) <https://moodle2.uni-potsdam.de/course/view.php?id=39283>

**Moodle Key:** dtms.go

The first session will be on 24.10.2023

## Lerninhalte

This course explores advanced topics and emerging scholarly knowledge about digital technology and its application to solve business and societal problems.

Together, we will examine a variety of foundational and technology-specific topics. This knowledge is relevant to managing technology-enabled organizing, which is ubiquitous, whether in services or manufacturing. The seminar has two objectives:

- 1) To provide students interested in digital transformation and data science with an opportunity to explore selected topics in much greater depth.
- 2) To equip students with additional research skills that they can use for their master's theses or future academic or professional careers.

Topics covered in the course include:

- Research: what it is and how it is done; what constitutes a contribution
- Social media and digital collaboration
- Artificial intelligence and the augmentation of decision-making
- Ethics of artificial intelligence
- Algorithmic management
- Technology and social inclusion
- Academic writing

## Zielgruppe

This course is designed for students with some knowledge and skill in working with academic literature and scientific methods (qualitative or quantitative). Within the course, we only brush up on such topics as reading and writing academic papers. What we offer is hands-on experience in conducting, presenting research, and writing papers. Note that the number of topics we offer is limited, and so are the slots at the course.

Having already completed such courses as Social Media Research or Advanced Research Methods during master's studies is preferred.

**Leistungen in Bezug auf das Modul**

SL 557131 - Vorlesung oder Seminar (unbenotet)

 **104669 VU - Survey Interdisciplinary Mathematics: A Project-Based Introduction (Ringvorlesung)**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                   |
|--------|-----|-----|---------------|----------|-------------------|------------|-----------------------------------------------------------------------------|
| 1      | V   | Di  | 12:15 - 13:45 | wöch.    | 2.09.1.10         | 17.10.2023 | Prof. Dr. Sebastian Reich, Dr. Niklas Hartung, Jun. Prof. Dr. Han Cheng Lie |
| 1      | U   | Di  | 14:15 - 15:45 | wöch.    | 2.09.1.10         | 17.10.2023 | Prof. Dr. Sebastian Reich, Dr. Niklas Hartung, Jun. Prof. Dr. Han Cheng Lie |
| 1      | V   | Do  | 16:15 - 17:45 | wöch.    | 2.09.1.10         | 19.10.2023 | Prof. Dr. Sebastian Reich, Dr. Niklas Hartung, Jun. Prof. Dr. Han Cheng Lie |

**Leistungen in Bezug auf das Modul**

PNL 557132 - Übung oder Projekt (unbenotet)

 **105020 P - NLP and Computer Vision with Deep Learning Research Seminar**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                |
|--------|-----|------|------|----------|-------------------|----------|--------------------------|
| 1      | P   | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Gerard de Melo |

**Leistungen in Bezug auf das Modul**

PNL 557132 - Übung oder Projekt (unbenotet)

 **105022 S2 - Machine Intelligence with Deep Learning**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft          |
|--------|-----|------|------|----------|-------------------|----------|--------------------|
| 1      | S2  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | PD Dr. Haojin Yang |

**Leistungen in Bezug auf das Modul**

PNL 557132 - Übung oder Projekt (unbenotet)

 **105052 VU - Biostatistics & Epidemiological data analysis using R**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft             |
|--------|-----|------|------|----------|-------------------|----------|-----------------------|
| 1      | VU  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Dr. Stefan Konigorski |

**Leistungen in Bezug auf das Modul**

PNL 557132 - Übung oder Projekt (unbenotet)

## Elective Modules - Research Modules

**INF-DS-RMA - Research Module A** **104288 PJ - Research Module A**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                 |
|--------|-----|------|------|----------|-------------------|----------|---------------------------|
| 1      | PJ  | N.N. | N.N. | Block    | N.N.              | N.N.     | Prof. Dr. Tobias Scheffer |

**Leistungen in Bezug auf das Modul**

SL 557142 - Übung oder Projekt (unbenotet)

 **104332 PJ - Declarative Problem Solving**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                               |
|--------|-----|-----|---------------|----------|-------------------|------------|-----------------------------------------------------------------------------------------|
| 1      | PJ  | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.05         | 16.10.2023 | Francois Laferriere, Javier Romero Davila, Prof. Dr. Torsten Schaub, Balázs Amadé Nemes |

| Kommentar                                                                                                                                                                                                                                                                                                                                                                                         |                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| In this project, student teams build software systems whose core consists of problem solvers for combinatorial (optimization) problems, like answer set programming                                                                                                                                                                                                                               |                                         |
| Voraussetzung                                                                                                                                                                                                                                                                                                                                                                                     |                                         |
| Good knowledge in ASP and/or SAT.                                                                                                                                                                                                                                                                                                                                                                 |                                         |
| Leistungsnachweis                                                                                                                                                                                                                                                                                                                                                                                 |                                         |
| Implementation, evaluation, presentation, and documentation                                                                                                                                                                                                                                                                                                                                       |                                         |
| Bemerkung                                                                                                                                                                                                                                                                                                                                                                                         |                                         |
| Offline communication is conducted primarily via the associated moodle page.<br><br>Announcements are also made through the email list of registered students in puls.<br><br>Questions can be address to <a href="mailto:krprojects@lists.cs.uni-potsdam.de">krprojects@lists.cs.uni-potsdam.de</a> . <a href="mailto:krprojects@lists.cs.uni-potsdam.de">krprojects@lists.cs.uni-potsdam.de</a> |                                         |
| Lerninhalte                                                                                                                                                                                                                                                                                                                                                                                       |                                         |
| On individual basis                                                                                                                                                                                                                                                                                                                                                                               |                                         |
| Kurzkommentar                                                                                                                                                                                                                                                                                                                                                                                     |                                         |
| Joint kick-off event for all projects of the professorship Knowledge Processing and Information Systems as announced in course catalogue of the department and the associated moodle page<br><br><a href="#">moodle</a>                                                                                                                                                                           |                                         |
| Zielgruppe                                                                                                                                                                                                                                                                                                                                                                                        |                                         |
| MSc students who want to deepen their practical knowledge in declarative modelling techniques and their application                                                                                                                                                                                                                                                                               |                                         |
| Leistungen in Bezug auf das Modul                                                                                                                                                                                                                                                                                                                                                                 |                                         |
| SL                                                                                                                                                                                                                                                                                                                                                                                                | 557142 - Übung oder Projekt (unbenotet) |

| 104813 PJ - Social Media Research Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |               |          |                   |            |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|---------------|----------|-------------------|------------|--------------------|
| Gruppe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft          |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PJ  | Di  | 14:00 - 18:00 | wöch.    | 3.06.H08          | 24.10.2023 | Margarita Gladkaya |
| Leistungsnachweis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |               |          |                   |            |                    |
| Students work in groups of 2 or 3. The aim of each group is to carry out research on a selected topic (selected by you and narrowed down or modified with the help of course instructors). Your research journey will be structured and overseen by experienced instructors. The course represents a setting where students' previously acquired book learning can finally come to life in practice, preparing the students for the next milestone - thesis writing.<br><br>The control points during the course are:<br><br>1) research exposé<br>2) in-class presentations<br>3) written paper |     |     |               |          |                   |            |                    |

### Bemerkung

This is a project-type course. This winter semester, the seminar and project are formally and content-wise separated. Please take it into account when registering.

Throughout the course, we will rely heavily on Moodle.

**Moodle Course:** [Social Media Research Project - WS 2023/24](#)

**Moodle Key:** SMR-prj-2324

Have a great start to the semester,  
Margarita Gladkaya

### Lerninhalte

Several social media platforms have gained incredible popularity in recent years (e.g., Facebook, Instagram, TikTok, etc.). Their phenomenal success manifests in millions of users all around the globe spending significant time on the platforms. Across its family of apps, only the Facebook company reaches 3.5 billion people monthly.

By rapidly changing the way we communicate, inform ourselves, spend free time, study, work, and consume goods, social media and other digital platforms transform the society that we live in today. The new developments raise questions about their meaning and long-term consequences.

Hence, possible topics will revolve around

- 1) the motivation to use digital platforms, e.g., social media
- 2) psychological and other outcomes of the use
- 3) the role of digital platforms for individuals and businesses

Depending on the topic, students will conduct literature reviews, qualitative, or quantitative studies. Close supervision is offered. Students present their preliminary results in class and submit a written paper at the end of the course.

### Zielgruppe

This course is designed for students with some knowledge and skill in working with academic literature and scientific methods (qualitative or quantitative). Within the course, we only brush up such topics as reading and writing academic papers. What we offer is hands-on experience in conducting, presenting research, and writing papers. Note that the number of topics we offer is limited, so are the slots at the course.

We look for students who have already completed (a) at least one seminar course (any seminar), which signals research experience, or (b) Social Media Research course, or (c) Advanced Research Methods course during their master's studies.

### Leistungen in Bezug auf das Modul

SL 557142 - Übung oder Projekt (unbenotet)

### INF-DS-RMB - Research Module B

| 104289 PJ - Research Module B |     |      |      |          |                   |          |                           |
|-------------------------------|-----|------|------|----------|-------------------|----------|---------------------------|
| Gruppe                        | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                 |
| 1                             | PJ  | N.N. | N.N. | Block    | N.N.              | N.N.     | Prof. Dr. Tobias Scheffer |

### Leistungen in Bezug auf das Modul

SL 557152 - Übung oder Projekt (unbenotet)

| 104813 PJ - Social Media Research Project |     |     |               |          |                   |            |                    |
|-------------------------------------------|-----|-----|---------------|----------|-------------------|------------|--------------------|
| Gruppe                                    | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft          |
| 1                                         | PJ  | Di  | 14:00 - 18:00 | wöch.    | 3.06.H08          | 24.10.2023 | Margarita Gladkaya |

### Leistungsnachweis

Students work in groups of 2 or 3. The aim of each group is to carry out research on a selected topic (selected by you and narrowed down or modified with the help of course instructors). Your research journey will be structured and overseen by experienced instructors. The course represents a setting where students' previously acquired book learning can finally come to life in practice, preparing the students for the next milestone - thesis writing.

The control points during the course are:

- 1) research exposé
- 2) in-class presentations
- 3) written paper

### Bemerkung

This is a project-type course. This winter semester, the seminar and project are formally and content-wise separated. Please take it into account when registering.

Throughout the course, we will rely heavily on Moodle.

**Moodle Course:** [Social Media Research Project - WS 2023/24](#)

**Moodle Key:** SMR-prj-2324

Have a great start to the semester,  
Margarita Gladkaya

### Lerninhalte

Several social media platforms have gained incredible popularity in recent years (e.g., Facebook, Instagram, TikTok, etc.). Their phenomenal success manifests in millions of users all around the globe spending significant time on the platforms. Across its family of apps, only the Facebook company reaches 3.5 billion people monthly.

By rapidly changing the way we communicate, inform ourselves, spend free time, study, work, and consume goods, social media and other digital platforms transform the society that we live in today. The new developments raise questions about their meaning and long-term consequences.

Hence, possible topics will revolve around

- 1) the motivation to use digital platforms, e.g., social media
- 2) psychological and other outcomes of the use
- 3) the role of digital platforms for individuals and businesses

Depending on the topic, students will conduct literature reviews, qualitative, or quantitative studies. Close supervision is offered. Students present their preliminary results in class and submit a written paper at the end of the course.

### Zielgruppe

This course is designed for students with some knowledge and skill in working with academic literature and scientific methods (qualitative or quantitative). Within the course, we only brush up such topics as reading and writing academic papers. What we offer is hands-on experience in conducting, presenting research, and writing papers. Note that the number of topics we offer is limited, so are the slots at the course.

We look for students who have already completed (a) at least one seminar course (any seminar), which signals research experience, or (b) Social Media Research course, or (c) Advanced Research Methods course during their master's studies.

### Leistungen in Bezug auf das Modul

SL 557152 - Übung oder Projekt (unbenotet)

## Elective Modules - Advanced Module

### BM3 - Advanced Problem Solving Techniques

| 104311 VU - Advanced Problem Solving Techniques |     |      |               |          |                   |            |                                                                                         |
|-------------------------------------------------|-----|------|---------------|----------|-------------------|------------|-----------------------------------------------------------------------------------------|
| Gruppe                                          | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                               |
| 1                                               | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.10         | 20.10.2023 | Prof. Dr. Torsten Schaub                                                                |
| 1                                               | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.11         | 03.11.2023 | Prof. Dr. Torsten Schaub                                                                |
| 1                                               | U   | N.N. | N.N.          | wöch.    | N.N.              | N.N.       | Francois Laferriere, Prof. Dr. Torsten Schaub, Javier Romero Davila, Balázs Amadé Nemes |

Times and Dates will be announced by the lecturer.

#### Kommentar

Answer Set Programming (ASP) is a prime approach to declarative problem solving. Although initially tailored to modeling problems in the area of Knowledge Representation and Reasoning (KRR), its attractive combination of a rich yet simple modeling language with high-performance solving capacities has sparked interests in academia and industry way beyond KRR. This course presents a detailed introduction to ASP, aiming at using ASP languages and systems for solving application problems. Starting from the essential formal foundations, it introduces ASP's solving technology, modeling language and methodology, while illustrating the overall solving process by practical examples.

#### Voraussetzung

Motivation.

#### Literatur

- Answer Set Solving in Practice by Martin Gebser, Roland Kaminski, Benjamin Kaufmann, and Torsten Schaub. Synthesis Lectures on Artificial Intelligence and Machine Learning, Morgan and Claypool
- Potassco User Guide by the Potassco team, <https://github.com/potassco/guide/releases>
- Answer Set Programming by Vladimir Lifschitz. Springer
- Knowledge Representation, Reasoning, and the Design of Intelligent Agents: The Answer-Set Programming Approach by Michael Gelfond and Yulia Kahl. Cambridge University Press

#### Leistungsnachweis

Marked exam, assignments, report and talk.

#### Bemerkung

Offline communication is conducted primarily via the associated moodle page.

Announcements are also made through the email list of registered students in puls.

Questions can be addressed to [asp@lists.cs.uni-potsdam.de](mailto:asp@lists.cs.uni-potsdam.de)

A tutorial introduction to answer set programming, used in the projects, is given separately.

#### Lerninhalte

- Motivation
- Introduction
- Modeling
- Language
- Grounding
- Foundations
- Solving
- Advanced modeling

#### Kurzkommentar

We start on Friday 20th of October at 12:00. More information about the course can be found at [Moodle](#) - cu

#### Zielgruppe

This is an introductory lecture for MSc students with varying backgrounds.

**Leistungen in Bezug auf das Modul**

SL 555912 - Übung (unbenotet)

 **104312 PJ - Advanced Problem Solving Techniques**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                                                                                    |
|--------|-----|------|------|----------|-------------------|----------|----------------------------------------------------------------------------------------------|
| 1      | PJ  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub,<br>Etienne Tignon |

**Kommentar**

Medium practical assignment accompanying the course, and preferably accomplished in a small group of preferably two persons

**Leistungsnachweis**

Successfully accomplished medium assignment, including report and presentation

**Leistungen in Bezug auf das Modul**

PNL 555914 - Projekt (unbenotet)

 **104313 PR - Advanced Problem Solving Techniques**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                                                                                    |
|--------|-----|------|------|----------|-------------------|----------|----------------------------------------------------------------------------------------------|
| 1      | PR  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub,<br>Etienne Tignon |

**Kommentar**

Suite of usually practical assignments accompanying the course

**Leistungsnachweis**

Successfully accomplished assignments

**Leistungen in Bezug auf das Modul**

PNL 555913 - Praktisches Arbeiten (unbenotet)

**INF-DSAM10 - Research Data Management, Law, and Ethics** **104338 VU - Forschungsdatenmanagement**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                   |
|--------|-----|-----|---------------|----------|-------------------|------------|-------------------------------------------------------------|
| 1      | V   | Mo  | 10:00 - 12:00 | wöch.    | 2.70.0.08         | 16.10.2023 | Prof. Dr.-Ing. Ulrike Lucke, Dr. rer. nat. Christian Riedel |
| 1      | U   | Di  | 16:00 - 18:00 | wöch.    | 2.70.0.08         | 17.10.2023 | Axel Wiepke                                                 |
| 1      | U   | Di  | 16:00 - 18:00 | Einzel   | 2.70.0.05         | 21.11.2023 | Axel Wiepke                                                 |
| 1      | U   | Di  | 16:00 - 18:00 | Einzel   | 2.70.0.01         | 30.01.2024 | Axel Wiepke                                                 |

### Kommentar

Die Naturwissenschaften gehören zu den größten Datenproduzenten; innovative technische und organisatorische Lösungen zur Speicherung und Verarbeitung großer Datenmengen in verteilten IT-Systemen sind daher unabdingbar. In dem Modul werden Themen behandelt wie:

- Grundlagen von Datenmanagement
- Open Access, Open Data und Open Science
- Forschungsdatenmanagement
- Speicherinfrastrukturen und -technologien
- ethische und rechtliche Aspekte
- nationale und internationale Initiativen

Begleitend werden Exkursionen zu ausgewählten Infrastrukturen an der Universität Potsdam angeboten.

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The sciences are among the largest producers of data; innovative technical and organizational solutions for storing and processing large amounts of data in distributed IT systems are therefore essential. The module will cover topics such as:

- Fundamentals of Data Management
- Open Access, Open Data and Open Science
- Research data management
- Storage infrastructures and technologies
- Ethical and legal aspects
- National and international initiatives

Accompanying excursions to selected infrastructures at the University of Potsdam are offered.

### Voraussetzung

Grundkenntnisse von Rechnernetzen

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basic knowledge on computer networks

### Leistungsnachweis

Die Leistungserfassung besteht aus insgesamt drei Komponenten:

- 1) erfolgreiche Bearbeitung von Übungsaufgaben, nachgewiesen durch Abgabe von mindestens 80% der Aufgabenblätter und Erreichen von mindestens 50% der Punkte
- 2) individuelle Erarbeitung eines Forschungsdatenmanagementplans, nachgewiesen durch Abgabe einer Projektbeschreibung, zwei Zwischenversionen des Plans und Peer-Feedback
- 3) Abgabe eines Forschungsdatenmanagementplans zu einem selbst gewählten Projekt

Dabei sind 1. und 2. Voraussetzungen für die Zulassung zur Modulprüfung, und die Modulnote für diesen Kurs ergibt sich aus 3.

-----

Assessment in this course consists of three components:

- 1) successful completion of exercises, proven by handing in at least 80% of the exercise sheets and achieving at least 50% of the points
- 2) individual development of a research data management plan, evidenced by submission of a project description, two intermediate versions of the plan and peer feedback
- 3) submission of a research data management plan for a self-chosen project

Here, 1. and 2. are prerequisites for the admission to the module examination, and the module grade for this course results from 3.

### Bemerkung

Depending on the participants, the course language will be English or German.

**Leistungen in Bezug auf das Modul**

PNL 557262 - Übung oder Projekt (unbenotet)

**INF-DSAM11 - Applied Data Science Internship** **104326 PJ - Railway Scheduling**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                                        |
|--------|-----|-----|---------------|----------|-------------------|------------|--------------------------------------------------------------------------------------------------|
| 1      | PJ  | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.05         | 16.10.2023 | Balázs Amadé Nemes,<br>Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub |

**Kommentar**

In this project, student teams build software systems addressing problems in railway scheduling using problem solvers for answer set programming. More information can be found at [Moodle](#).

**Voraussetzung**

Knowledge in answer set programming

**Leistungsnachweis**

Implementation, evaluation, presentation, and documentation.

**Bemerkung**

Offline communication is conducted primarily via the associated moodle page.

Announcements are also made through the email list of registered students in puls.

Questions can be address to [flatland@lists.cs.uni-potsdam.de](mailto:flatland@lists.cs.uni-potsdam.de).

**Lerninhalte**

On individual basis

**Kurzkommentar**

Joint kick-off event for all projects of the professorship Knowledge Processing and Information Systems as announced in course catalog of the department and the associated moodle page.

**Zielgruppe**

Students interested in applying AI-techniques in scheduling

**Leistungen in Bezug auf das Modul**

SL 557271 - Praktikum (mind. 8 Wochen) (unbenotet)

 **104332 PJ - Declarative Problem Solving**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                                        |
|--------|-----|-----|---------------|----------|-------------------|------------|--------------------------------------------------------------------------------------------------|
| 1      | PJ  | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.05         | 16.10.2023 | Francois Laferriere,<br>Javier Romero Davila,<br>Prof. Dr. Torsten Schaub,<br>Balázs Amadé Nemes |

**Kommentar**

In this project, student teams build software systems whose core consists of problem solvers for combinatorial (optimization) problems, like answer set programming

|                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Voraussetzung</b>                                                                                                                                                                                                                                                                                                                                                                      |
| Good knowledge in ASP and/or SAT.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Leistungsnachweis</b>                                                                                                                                                                                                                                                                                                                                                                  |
| Implementation, evaluation, presentation, and documentation                                                                                                                                                                                                                                                                                                                               |
| <b>Bemerkung</b>                                                                                                                                                                                                                                                                                                                                                                          |
| Offline communication is conducted primarily via the associated moodle page.<br>Announcements are also made through the email list of registered students in puls.<br>Questions can be address to <a href="mailto:krprojects@lists.cs.uni-potsdam.de">krprojects@lists.cs.uni-potsdam.de</a> . <a href="mailto:krprojects@lists.cs.uni-potsdam.de">krprojects@lists.cs.uni-potsdam.de</a> |
| <b>Lerninhalte</b>                                                                                                                                                                                                                                                                                                                                                                        |
| On individual basis                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Kurzkomentar</b>                                                                                                                                                                                                                                                                                                                                                                       |
| Joint kick-off event for all projects of the professorship Knowledge Processing and Information Systems as announced in course catalogue of the department and the associated moodle page<br><br><a href="#">moodle</a>                                                                                                                                                                   |
| <b>Zielgruppe</b>                                                                                                                                                                                                                                                                                                                                                                         |
| MSc students who want to deepen their practical knowledge in declarative modelling techniques and their application                                                                                                                                                                                                                                                                       |
| <b>Leistungen in Bezug auf das Modul</b>                                                                                                                                                                                                                                                                                                                                                  |
| SL 557271 - Praktikum (mind. 8 Wochen) (unbenotet)                                                                                                                                                                                                                                                                                                                                        |

|  | <b>105153 PR - Applied Data Science Internship</b> |      |      |          |                   |          |                          |
|-------------------------------------------------------------------------------------|----------------------------------------------------|------|------|----------|-------------------|----------|--------------------------|
| Gruppe                                                                              | Art                                                | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                |
| 1                                                                                   | PR                                                 | N.N. | N.N. | Block    | N.N.              | N.N.     | Prof. Dr. Bettina Schnor |
| <b>Leistungen in Bezug auf das Modul</b>                                            |                                                    |      |      |          |                   |          |                          |
| SL                                                                                  | 557271 - Praktikum (mind. 8 Wochen) (unbenotet)    |      |      |          |                   |          |                          |

| <b>INF-DSAM1A - Advanced Machine Learning A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                           |     |               |          |                   |            |                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----|---------------|----------|-------------------|------------|---------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>104287 VU - Maschinelles Lernen &amp; Intelligente Datenanalyse II</b> |     |               |          |                   |            |                           |
| Gruppe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Art                                                                       | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                 |
| Alle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | V                                                                         | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| Alle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | V                                                                         | Mo  | 12:00 - 14:00 | Einzel   | Online.Veranstalt | 20.11.2023 | Prof. Dr. Tobias Scheffer |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U                                                                         | Mo  | 14:00 - 16:00 | wöch.    | 2.70.0.09         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U                                                                         | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 17.10.2023 | Prof. Dr. Tobias Scheffer |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | U                                                                         | Mi  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 18.10.2023 | Prof. Dr. Tobias Scheffer |
| <b>Kommentar</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                           |     |               |          |                   |            |                           |
| Aufbauend auf der Vorlesung Intelligente Datenanalyse beschäftigt sich die Veranstaltung vertiefend mit Algorithmen, die aus Daten lernen können. Algorithmen des maschinellen Lernens gewinnen aus Daten Modelle, mit denen sich dann Vorhersagen über das beobachtete System treffen lassen. Anwendungen für Datenanalyse-Verfahren erstrecken sich von der Vorhersage von Kreditrisiken über die Auswertung astronomischer Daten bis zu persönlichen Musikempfehlungen. Die Veranstaltung setzt sich aus einem Vorlesungs- und einem Projektteil zusammen. Der Vorlesungsteil vermittelt das notwendige Wissen über Datenanalyse sowie über Matlab. Im Projektteil werden anwendungsnahe Aufgaben eigenständig bearbeitet. |                                                                           |     |               |          |                   |            |                           |
| <b>Voraussetzung</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                           |     |               |          |                   |            |                           |
| Intelligente Datenanalyse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                           |     |               |          |                   |            |                           |

**Leistungsnachweis**

Projektaufgabe und mündliche Prüfung

**Leistungen in Bezug auf das Modul**

PNL 557161 - Vorlesung und Laborübung (unbenotet)

**INF-DSAM1B - Advanced Machine Learning B** **104287 VU - Maschinelles Lernen & Intelligente Datenanalyse II**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                 |
|--------|-----|-----|---------------|----------|-------------------|------------|---------------------------|
| Alle   | V   | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| Alle   | V   | Mo  | 12:00 - 14:00 | Einzel   | Online.Veranstalt | 20.11.2023 | Prof. Dr. Tobias Scheffer |
| 1      | U   | Mo  | 14:00 - 16:00 | wöch.    | 2.70.0.09         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| 2      | U   | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 17.10.2023 | Prof. Dr. Tobias Scheffer |
| 3      | U   | Mi  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 18.10.2023 | Prof. Dr. Tobias Scheffer |

**Kommentar**

Aufbauend auf der Vorlesung Intelligente Datenanalyse beschäftigt sich die Veranstaltung vertiefend mit Algorithmen, die aus Daten lernen können. Algorithmen des maschinellen Lernens gewinnen aus Daten Modelle, mit denen sich dann Vorhersagen über das beobachtete System treffen lassen. Anwendungen für Datenanalyse-Verfahren erstrecken sich von der Vorhersage von Kreditrisiken über die Auswertung astronomischer Daten bis zu persönlichen Musikempfehlungen. Die Veranstaltung setzt sich aus einem Vorlesungs- und einem Projektteil zusammen. Der Vorlesungsteil vermittelt das notwendige Wissen über Datenanalyse sowie über Matlab. Im Projektteil werden anwendungsnahe Aufgaben eigenständig bearbeitet.

**Voraussetzung**

Intelligente Datenanalyse

**Leistungsnachweis**

Projektaufgabe und mündliche Prüfung

 **105019 P - AI in Practice: Implementing Real-World Solutions**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                |
|--------|-----|------|------|----------|-------------------|----------|--------------------------|
| 1      | P   | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Gerard de Melo |

 **105022 S2 - Machine Intelligence with Deep Learning**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft          |
|--------|-----|------|------|----------|-------------------|----------|--------------------|
| 1      | S2  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | PD Dr. Haojin Yang |

 **105045 PS - Competitive Programming with Deep Learning 2**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                  |
|--------|-----|------|------|----------|-------------------|----------|----------------------------|
| 1      | PS  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Tobias Friedrich |

**INF-DSAM1B - Advanced Machine Learning B (auslaufend)**

Dieses Modul gilt, aufgrund einer Änderungssatzung, nur noch für Studierende, die das Modul vor dem 01.10.2023 begonnen haben. Das Modul läuft spätestens am 30.09.2025 aus.

 **102583 U - Advanced Natural Language Processing**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                          |
|--------|-----|-----|---------------|----------|-------------------|------------|------------------------------------|
| 1      | U   | Mo  | 10:00 - 12:00 | wöch.    | 2.14.0.21         | 16.10.2023 | Prof. Dr. David Schlangen, Meng Li |

**Kommentar**

Please note that the Übung will start in week 2 (Monday Oct 23rd). In week 1 (Oct 16th), there will be the general CogSys welcome meeting during this time.

**Leistungen in Bezug auf das Modul**

PNL 557172 - Seminar (unbenotet)

**104287 VU - Maschinelles Lernen & Intelligente Datenanalyse II**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                 |
|--------|-----|-----|---------------|----------|-------------------|------------|---------------------------|
| Alle   | V   | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| Alle   | V   | Mo  | 12:00 - 14:00 | Einzel   | Online.Veranstalt | 20.11.2023 | Prof. Dr. Tobias Scheffer |
| 1      | U   | Mo  | 14:00 - 16:00 | wöch.    | 2.70.0.09         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| 2      | U   | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 17.10.2023 | Prof. Dr. Tobias Scheffer |
| 3      | U   | Mi  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 18.10.2023 | Prof. Dr. Tobias Scheffer |

**Kommentar**

Aufbauend auf der Vorlesung Intelligente Datenanalyse beschäftigt sich die Veranstaltung vertiefend mit Algorithmen, die aus Daten lernen können. Algorithmen des maschinellen Lernens gewinnen aus Daten Modelle, mit denen sich dann Vorhersagen über das beobachtete System treffen lassen. Anwendungen für Datenanalyse-Verfahren erstrecken sich von der Vorhersage von Kreditrisiken über die Auswertung astronomischer Daten bis zu persönlichen Musikempfehlungen. Die Veranstaltung setzt sich aus einem Vorlesungs- und einem Projektteil zusammen. Der Vorlesungsteil vermittelt das notwendige Wissen über Datenanalyse sowie über Matlab. Im Projektteil werden anwendungsnahe Aufgaben eigenständig bearbeitet.

**Voraussetzung**

Intelligente Datenanalyse

**Leistungsnachweis**

Projektaufgabe und mündliche Prüfung

**Leistungen in Bezug auf das Modul**

PNL 557172 - Seminar (unbenotet)

**INF-DSAM4A - Advanced Infrastructures and Software Engineering A****103774 DF - Introduction to databases and practical programming**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft        |
|--------|-----|-----|---------------|----------|-------------------|------------|------------------|
| 1      | V   | Fr  | 08:15 - 09:15 | wöch.    | 2.70.0.01         | 20.10.2023 | Dr. Detlef Groth |
| 1      | SU  | Fr  | 09:45 - 11:45 | wöch.    | 2.70.0.01         | 20.10.2023 | Dr. Detlef Groth |

**Kommentar**

Dear students,  
for those students which does not yet have the Moodle course link, here it is:  
<https://moodle2.uni-potsdam.de/course/view.php?id=39233>

The course key is:  
Golm2324X

There will be a parallel Zoom session mainly for students not yet in Germany or in case you are not fit. Here is the Zoom link:  
<https://uni-potsdam.zoom.us/j/94438873701> (Password: 21955051) Fri 08:15-11:45  
Detlef Groth

**Leistungen in Bezug auf das Modul**

PNL 557185 - Übung oder Projekt (unbenotet)

**104281 VU - Softwarequalität**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                     |
|--------|-----|-----|---------------|----------|-------------------|------------|-------------------------------|
| Alle   | V   | Do  | 12:00 - 14:00 | wöch.    | 2.70.0.08         | 19.10.2023 | Prof. Dr. Anna-Lena Lamprecht |
| 1      | PJ  | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.08         | 23.10.2023 | Prof. Dr. Anna-Lena Lamprecht |
| 2      | PJ  | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 24.10.2023 | Prof. Dr. Anna-Lena Lamprecht |

**Leistungen in Bezug auf das Modul**

PNL 557185 - Übung oder Projekt (unbenotet)

### INF-DSAM4B - Advanced Infrastructures and Software Engineering B

#### 104281 VU - Softwarequalität

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                     |
|--------|-----|-----|---------------|----------|-------------------|------------|-------------------------------|
| Alle   | V   | Do  | 12:00 - 14:00 | wöch.    | 2.70.0.08         | 19.10.2023 | Prof. Dr. Anna-Lena Lamprecht |
| 1      | PJ  | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.08         | 23.10.2023 | Prof. Dr. Anna-Lena Lamprecht |
| 2      | PJ  | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 24.10.2023 | Prof. Dr. Anna-Lena Lamprecht |

#### Leistungen in Bezug auf das Modul

**PNL** 557192 - Übung oder Projekt (unbenotet)

#### 105036 SU - Trends and Concepts in the Software Industry - Consulting the Business

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft        |
|--------|-----|------|------|----------|-------------------|----------|------------------|
| 1      | SU  | N.N. | N.N. | Block    | N.N.              | N.N.     | Dr. Ralf Teusner |

#### Leistungen in Bezug auf das Modul

**PNL** 557192 - Übung oder Projekt (unbenotet)

### INF-DSAM5A - Advanced Business Analytics A

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

### INF-DSAM5A - Advanced Business Analytics A (expiring module)

Dieses Modul gilt, aufgrund einer Änderungssatzung, nur noch für Studierende, die das Modul vor dem 01.10.2022 begonnen haben. Das Modul läuft spätestens am 30.09.2024 aus.

#### 104455 S - Digital technology for management and society

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft     |
|--------|-----|-----|---------------|----------|-------------------|------------|---------------|
| 1      | S   | Di  | 14:00 - 16:00 | wöch.    | 3.06.S16          | 17.10.2023 | Olga Abramova |

#### Kommentar

Dear students,

Please self-enroll

**Moodle Course:** Digital technology for management and society Seminar WS 2023 ( [DTMS\\_WS2023](#) ) <https://moodle2.uni-potsdam.de/course/view.php?id=39283>

**Moodle Key:** dtms.go

The first session will be on 24.10.2023

### Lerninhalte

This course explores advanced topics and emerging scholarly knowledge about digital technology and its application to solve business and societal problems.

Together, we will examine a variety of foundational and technology-specific topics. This knowledge is relevant to managing technology-enabled organizing, which is ubiquitous, whether in services or manufacturing. The seminar has two objectives:

- 1) To provide students interested in digital transformation and data science with an opportunity to explore selected topics in much greater depth.
- 2) To equip students with additional research skills that they can use for their master's theses or future academic or professional careers.

Topics covered in the course include:

- Research: what it is and how it is done; what constitutes a contribution
- Social media and digital collaboration
- Artificial intelligence and the augmentation of decision-making
- Ethics of artificial intelligence
- Algorithmic management
- Technology and social inclusion
- Academic writing

### Zielgruppe

This course is designed for students with some knowledge and skill in working with academic literature and scientific methods (qualitative or quantitative). Within the course, we only brush up on such topics as reading and writing academic papers. What we offer is hands-on experience in conducting, presenting research, and writing papers. Note that the number of topics we offer is limited, and so are the slots at the course.

Having already completed such courses as Social Media Research or Advanced Research Methods during master's studies is preferred.

### Leistungen in Bezug auf das Modul

PNL 557202 - Seminar 1 (unbenotet)

PNL 557203 - Seminar 2 (unbenotet)

### 104812 S - Social Media Research Seminar 2

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                |
|--------|-----|-----|---------------|----------|-------------------|------------|--------------------------|
| 1      | S   | Di  | 12:00 - 14:00 | Einzel   | 3.06.S18          | 12.12.2023 | Prof. Dr. Hanna Krasnova |

### Leistungen in Bezug auf das Modul

PNL 557202 - Seminar 1 (unbenotet)

PNL 557203 - Seminar 2 (unbenotet)

### INF-DSAM5B - Advanced Business Analytics B

#### 104455 S - Digital technology for management and society

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft     |
|--------|-----|-----|---------------|----------|-------------------|------------|---------------|
| 1      | S   | Di  | 14:00 - 16:00 | wöch.    | 3.06.S16          | 17.10.2023 | Olga Abramova |

### Kommentar

Dear students,

Please self-enroll

**Moodle Course:** Digital technology for management and society Seminar WS 2023 ( [DTMS\\_WS2023](#) ) <https://moodle2.uni-potsdam.de/course/view.php?id=39283>

**Moodle Key:** dtms.go

The first session will be on 24.10.2023

### Lerninhalte

This course explores advanced topics and emerging scholarly knowledge about digital technology and its application to solve business and societal problems.

Together, we will examine a variety of foundational and technology-specific topics. This knowledge is relevant to managing technology-enabled organizing, which is ubiquitous, whether in services or manufacturing. The seminar has two objectives:

- 1) To provide students interested in digital transformation and data science with an opportunity to explore selected topics in much greater depth.
- 2) To equip students with additional research skills that they can use for their master's theses or future academic or professional careers.

Topics covered in the course include:

- Research: what it is and how it is done; what constitutes a contribution
- Social media and digital collaboration
- Artificial intelligence and the augmentation of decision-making
- Ethics of artificial intelligence
- Algorithmic management
- Technology and social inclusion
- Academic writing

### Zielgruppe

This course is designed for students with some knowledge and skill in working with academic literature and scientific methods (qualitative or quantitative). Within the course, we only brush up on such topics as reading and writing academic papers. What we offer is hands-on experience in conducting, presenting research, and writing papers. Note that the number of topics we offer is limited, and so are the slots at the course.

Having already completed such courses as Social Media Research or Advanced Research Methods during master's studies is preferred.

### Leistungen in Bezug auf das Modul

SL 557212 - Seminar (unbenotet)

### INF-DSAM6A - Advanced Applied Data Science A

#### 102583 U - Advanced Natural Language Processing

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                          |
|--------|-----|-----|---------------|----------|-------------------|------------|------------------------------------|
| 1      | U   | Mo  | 10:00 - 12:00 | wöch.    | 2.14.0.21         | 16.10.2023 | Prof. Dr. David Schlangen, Meng Li |

### Kommentar

Please note that the Übung will start in week 2 (Monday Oct 23rd). In week 1 (Oct 16th), there will be the general CogSys welcome meeting during this time.

**Leistungen in Bezug auf das Modul**

SL 557222 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

 **102584 V - Advanced Natural Language Processing**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                          |
|--------|-----|-----|---------------|----------|-------------------|------------|------------------------------------|
| 1      | V   | Do  | 10:00 - 12:00 | wöch.    | 2.14.2.22         | 19.10.2023 | Prof. Dr. David Schlangen, Meng Li |

**Leistungen in Bezug auf das Modul**

SL 557221 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

 **104311 VU - Advanced Problem Solving Techniques**

| Gruppe | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                               |
|--------|-----|------|---------------|----------|-------------------|------------|-----------------------------------------------------------------------------------------|
| 1      | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.10         | 20.10.2023 | Prof. Dr. Torsten Schaub                                                                |
| 1      | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.11         | 03.11.2023 | Prof. Dr. Torsten Schaub                                                                |
| 1      | U   | N.N. | N.N.          | wöch.    | N.N.              | N.N.       | Francois Laferriere, Prof. Dr. Torsten Schaub, Javier Romero Davila, Balázs Amadé Nemes |

Times and Dates will be announced by the lecturer.

**Kommentar**

Answer Set Programming (ASP) is a prime approach to declarative problem solving. Although initially tailored to modeling problems in the area of Knowledge Representation and Reasoning (KRR), its attractive combination of a rich yet simple modeling language with high-performance solving capacities has sparked interests in academia and industry way beyond KRR. This course presents a detailed introduction to ASP, aiming at using ASP languages and systems for solving application problems. Starting from the essential formal foundations, it introduces ASP's solving technology, modeling language and methodology, while illustrating the overall solving process by practical examples.

**Voraussetzung**

Motivation.

**Literatur**

- Answer Set Solving in Practice by Martin Gebser, Roland Kaminski, Benjamin Kaufmann, and Torsten Schaub. Synthesis Lectures on Artificial Intelligence and Machine Learning, Morgan and Claypool
- Potassco User Guide by the Potassco team, <https://github.com/potassco/guide/releases>
- Answer Set Programming by Vladimir Lifschitz. Springer
- Knowledge Representation, Reasoning, and the Design of Intelligent Agents: The Answer-Set Programming Approach by Michael Gelfond and Yulia Kahl. Cambridge University Press

**Leistungsnachweis**

Marked exam, assignments, report and talk.

**Bemerkung**

Offline communication is conducted primarily via the associated moodle page.

Announcements are also made through the email list of registered students in puls.

Questions can be addressed to [asp@lists.cs.uni-potsdam.de](mailto:asp@lists.cs.uni-potsdam.de)

A tutorial introduction to answer set programming, used in the projects, is given separately.

**Lerninhalte**

- Motivation
- Introduction
- Modeling
- Language
- Grounding
- Foundations
- Solving
- Advanced modeling

**Kurzkommentar**

We start on Friday 20th of October at 12:00. More information about the course can be found at [Moodle](#) . - cu

**Zielgruppe**

This is an introductory lecture for MSc students with varying backgrounds.

**Leistungen in Bezug auf das Modul**

SL 557222 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

**104313 PR - Advanced Problem Solving Techniques**

| Gruppe | Art | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                                                                                    |
|--------|-----|------|------|----------|-------------------|----------|----------------------------------------------------------------------------------------------|
| 1      | PR  | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub,<br>Etienne Tignon |

**Kommentar**

Suite of usually practical assignments accompanying the course

**Leistungsnachweis**

Successfully accomplished assignments

**Leistungen in Bezug auf das Modul**

SL 557221 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

**INF-DSAM6B - Advanced Applied Data Science B****103558 DF - Bioimage Analysis and Extended Phenotyping**

| Gruppe | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft            |
|--------|-----|------|---------------|----------|-------------------|------------|----------------------|
| 1      | V   | Fr   | 09:15 - 10:45 | wöch.    | 2.25.B2.01        | 20.10.2023 | Dr. Christian Kappel |
| 1      | SU  | Fr   | 11:00 - 11:45 | wöch.    | 2.25.B2.01        | 20.10.2023 | Dr. Christian Kappel |
| 1      | B   | N.N. | 09:00 - 17:00 | Block    | 2.25.D2.01        | 19.02.2024 | Dr. Christian Kappel |
| 1      | B   | N.N. | 09:00 - 17:00 | Block    | 2.25.B2.01        | 19.02.2024 | Dr. Christian Kappel |

**Kommentar**

1) This will be a hybrid course, Online participation via Zoom (Meeting ID: 655 4521 3465; Passcode: 06185980), exercises sessions also.

2) There will be one week of practical work after the lecture period. We will regularly meet (Online or in person) then, you're encouraged to work in groups there. Details will/can be discussion in the first session and later on if necessary.

3) There is a Moodle.UP course where you will find all kind of materials and discussion forums, <https://moodle2.uni-potsdam.de/course/view.php?id=38039> .

For the 8LP Modules (WM4,5,6) 2-week practicals are offered. This may be an extension of the practical work or something totally different. We will discuss together to find the best fit for you.

Please contact [christian.kappel@uni-potsdam.de](mailto:christian.kappel@uni-potsdam.de) for any question.

**Leistungen in Bezug auf das Modul**

SL 557231 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

| 104320 VU - Declarative Problem Solving and Optimization |     |      |               |          |                   |            |                                                                           |
|----------------------------------------------------------|-----|------|---------------|----------|-------------------|------------|---------------------------------------------------------------------------|
| Gruppe                                                   | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                 |
| 1                                                        | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.10         | 20.10.2023 | Prof. Dr. Torsten Schaub                                                  |
| 1                                                        | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.11         | 03.11.2023 | Prof. Dr. Torsten Schaub                                                  |
| 1                                                        | U   | N.N. | N.N.          | wöch.    | N.N.              | N.N.       | Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub |

Times and Dates will be announced by the lecturer.

**Kommentar**

Answer Set Programming (ASP) is a prime approach to declarative problem solving. Although initially tailored to modeling problems in the area of Knowledge Representation and Reasoning (KRR), its attractive combination of a rich yet simple modeling language with high-performance solving capacities has sparked interests in academia and industry way beyond KRR. This course presents a detailed introduction to ASP, aiming at using ASP languages and systems for solving application problems. Starting from the essential formal foundations, it introduces ASP's solving technology, modeling language and methodology, while illustrating the overall solving process by practical examples.

**Voraussetzung**

Motivation.

**Literatur**

- Answer Set Solving in Practice by Martin Gebser, Roland Kaminski, Benjamin Kaufmann, and Torsten Schaub. Synthesis Lectures on Artificial Intelligence and Machine Learning, Morgan and Claypool
- Potassco User Guide by the Potassco team, <https://github.com/potassco/guide/releases>
- Answer Set Programming by Vladimir Lifschitz. Springer
- Knowledge Representation, Reasoning, and the Design of Intelligent Agents: The Answer-Set Programming Approach by Michael Gelfond and Yulia Kahl. Cambridge University Press

**Leistungsnachweis**

Marked exam and assignments

**Bemerkung**

Offline communication is conducted primarily via the associated moodle page.

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Questions can be addressed to [asp@lists.cs.uni-potsdam.de](mailto:asp@lists.cs.uni-potsdam.de)

A tutorial introduction to answer set programming, used in the projects, is given separately.

**Lerninhalte**

- Motivation
- Introduction
- Modeling
- Language
- Grounding
- Foundations
- Solving
- Advanced modeling

**Kurzkommentar**

We start on Friday 20th of October at 12:00. More information about the course can be found at [Moodle](#) . - cu

**Zielgruppe**

This is an introductory lecture for MSc students with varying backgrounds.

**Leistungen in Bezug auf das Modul**

SL 557231 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

| 104483 VU - Mobile and Digital Business |                                |     |               |          |                   |            |                            |
|-----------------------------------------|--------------------------------|-----|---------------|----------|-------------------|------------|----------------------------|
| Gruppe                                  | Art                            | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                  |
| 1                                       | B                              | Do  | 09:30 - 18:00 | Einzel   | 3.06.S16          | 26.10.2023 | Prof. Dr. Stefan Stieglitz |
|                                         | weitere Termine nach Absprache |     |               |          |                   |            |                            |
| 1                                       | B                              | Do  | 09:30 - 12:00 | Einzel   | 3.06.S18          | 16.11.2023 | Prof. Dr. Stefan Stieglitz |
|                                         | weitere Termine nach Absprache |     |               |          |                   |            |                            |
| 1                                       | B                              | Do  | 12:00 - 18:00 | Einzel   | 3.06.S12          | 16.11.2023 | Prof. Dr. Stefan Stieglitz |
|                                         | weitere Termine nach Absprache |     |               |          |                   |            |                            |
| 1                                       | B                              | Do  | 09:30 - 12:00 | Einzel   | 3.06.S27          | 08.02.2024 | Prof. Dr. Stefan Stieglitz |
|                                         | weitere Termine nach Absprache |     |               |          |                   |            |                            |
| 1                                       | B                              | Do  | 12:00 - 18:00 | Einzel   | 3.06.S12          | 08.02.2024 | Prof. Dr. Stefan Stieglitz |
|                                         | weitere Termine nach Absprache |     |               |          |                   |            |                            |

**Bemerkung**

In diesem Semester wird die Veranstaltung in Blockterminen und begleitender Gruppenarbeit durchgeführt. Als Leistungsnachweis sind eine Hausarbeit/Forschungsartikel sowie zwei Präsentationen zu erbringen.

**Leistungen in Bezug auf das Modul**

SL 557231 - Vorlesung / Seminar / Übung / Projekt (unbenotet)

| 105020 P - NLP and Computer Vision with Deep Learning Research Seminar |                                                            |      |      |          |                   |          |                          |
|------------------------------------------------------------------------|------------------------------------------------------------|------|------|----------|-------------------|----------|--------------------------|
| Gruppe                                                                 | Art                                                        | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                |
| 1                                                                      | P                                                          | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Gerard de Melo |
| Leistungen in Bezug auf das Modul                                      |                                                            |      |      |          |                   |          |                          |
| SL                                                                     | 557231 - Vorlesung / Seminar / Übung / Projekt (unbenotet) |      |      |          |                   |          |                          |

| 105045 PS - Competitive Programming with Deep Learning 2 |                                                            |      |      |          |                   |          |                            |
|----------------------------------------------------------|------------------------------------------------------------|------|------|----------|-------------------|----------|----------------------------|
| Gruppe                                                   | Art                                                        | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                  |
| 1                                                        | PS                                                         | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Tobias Friedrich |
| Leistungen in Bezug auf das Modul                        |                                                            |      |      |          |                   |          |                            |
| SL                                                       | 557231 - Vorlesung / Seminar / Übung / Projekt (unbenotet) |      |      |          |                   |          |                            |

| 105057 S - Advanced Machine Learning Seminar |                                                            |      |      |          |                   |          |                             |
|----------------------------------------------|------------------------------------------------------------|------|------|----------|-------------------|----------|-----------------------------|
| Gruppe                                       | Art                                                        | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft                   |
| 1                                            | VU                                                         | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Christoph Lippert |
| Leistungen in Bezug auf das Modul            |                                                            |      |      |          |                   |          |                             |
| SL                                           | 557231 - Vorlesung / Seminar / Übung / Projekt (unbenotet) |      |      |          |                   |          |                             |

| INF-DSAM7 - Computer Engineering for Big Data |                                         |      |      |          |                   |          |                        |
|-----------------------------------------------|-----------------------------------------|------|------|----------|-------------------|----------|------------------------|
| 105096 P - Data Processing on Modern Hardware |                                         |      |      |          |                   |          |                        |
| Gruppe                                        | Art                                     | Tag  | Zeit | Rhythmus | Veranstaltungsort | 1.Termin | Lehrkraft              |
| 1                                             | P                                       | N.N. | N.N. | wöch.    | N.N.              | N.N.     | Prof. Dr. Tilmann Rabl |
| Leistungen in Bezug auf das Modul             |                                         |      |      |          |                   |          |                        |
| PNL                                           | 557242 - Übung oder Projekt (unbenotet) |      |      |          |                   |          |                        |

| INF-DSAM9 - Computational Foundations of Data Science                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                          |     |               |          |                   |            |                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----|---------------|----------|-------------------|------------|---------------------------|
| 104287 VU - Maschinelles Lernen & Intelligente Datenanalyse II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                          |     |               |          |                   |            |                           |
| Gruppe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Art                                      | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                 |
| Alle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | V                                        | Mo  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| Alle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | V                                        | Mo  | 12:00 - 14:00 | Einzel   | Online.Veranstalt | 20.11.2023 | Prof. Dr. Tobias Scheffer |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | U                                        | Mo  | 14:00 - 16:00 | wöch.    | 2.70.0.09         | 16.10.2023 | Prof. Dr. Tobias Scheffer |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | U                                        | Di  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 17.10.2023 | Prof. Dr. Tobias Scheffer |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | U                                        | Mi  | 12:00 - 14:00 | wöch.    | 2.70.0.09         | 18.10.2023 | Prof. Dr. Tobias Scheffer |
| Kommentar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |     |               |          |                   |            |                           |
| <p>Aufbauend auf der Vorlesung Intelligente Datenanalyse beschäftigt sich die Veranstaltung vertiefend mit Algorithmen, die aus Daten lernen können. Algorithmen des maschinellen Lernens gewinnen aus Daten Modelle, mit denen sich dann Vorhersagen über das beobachtete System treffen lassen. Anwendungen für Datenanalyse-Verfahren erstrecken sich von der Vorhersage von Kreditrisiken über die Auswertung astronomischer Daten bis zu persönlichen Musikempfehlungen. Die Veranstaltung setzt sich aus einem Vorlesungs- und einem Projektteil zusammen. Der Vorlesungsteil vermittelt das notwendige Wissen über Datenanalyse sowie über Matlab. Im Projektteil werden anwendungsnahe Aufgaben eigenständig bearbeitet.</p> |                                          |     |               |          |                   |            |                           |
| Voraussetzung                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                          |     |               |          |                   |            |                           |
| Intelligente Datenanalyse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |     |               |          |                   |            |                           |
| Leistungsnachweis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                          |     |               |          |                   |            |                           |
| Projektaufgabe und mündliche Prüfung                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                          |     |               |          |                   |            |                           |
| Leistungen in Bezug auf das Modul                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                          |     |               |          |                   |            |                           |
| PNL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 557251 - Vorlesung und Übung (unbenotet) |     |               |          |                   |            |                           |

| 104305 VU - Einführung in Hardware- und Systembeschreibungssprachen |     |     |               |                                                                                                                         |                   |            |                                              |
|---------------------------------------------------------------------|-----|-----|---------------|-------------------------------------------------------------------------------------------------------------------------|-------------------|------------|----------------------------------------------|
| Gruppe                                                              | Art | Tag | Zeit          | Rhythmus                                                                                                                | Veranstaltungsort | 1.Termin   | Lehrkraft                                    |
| 1                                                                   | V   | Fr  | 10:00 - 12:00 | wöch.                                                                                                                   | 2.70.0.10         | 20.10.2023 | Prof. Dr. Milos Krstic                       |
| 1                                                                   | U   | Fr  | 12:00 - 14:00 | wöch.                                                                                                                   | 2.70.0.01         | 20.10.2023 | Prof. Dr. Milos Krstic, Anselm Breitenreiter |
| Links:                                                              |     |     |               |                                                                                                                         |                   |            |                                              |
| Moodle, Key: "IntroHDL24"                                           |     |     |               | <a href="https://openup.uni-potsdam.de/course/view.php?id=384">https://openup.uni-potsdam.de/course/view.php?id=384</a> |                   |            |                                              |

## Kommentar

First introductory lecture will be on Fr Oct 27th at 10 am in Zoom (as exception).

Here are connection details:

Prof. Dr. Milos Krstic lädt Sie zu einem geplanten Zoom-Meeting ein.

Thema: Introductory lecture "Introduction to HDL and SDL"  
Zeit: 27.Okt. 2023 10:00 AM Amsterdam, Berlin, Rom, Stockholm, Wien

Beitreten Zoom Meeting  
<https://uni-potsdam.zoom.us/j/61876536967>

Meeting-ID: 618 7653 6967  
Kenncode: 58613689

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Schnelleinwahl mobil  
+496971049922,,61876536967#,,,,\*58613689# Deutschland  
+496950502596,,61876536967#,,,,\*58613689# Deutschland

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Einwahl nach aktuellem Standort  
• +49 69 7104 9922 Deutschland  
• +49 695 050 2596 Deutschland

Meeting-ID: 618 7653 6967  
Kenncode: 58613689

Ortseinwahl suchen: <https://uni-potsdam.zoom.us/j/61876536967>

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Über SIP beitreten  
• 61876536967@fr.zmeu.us

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Über H.323 beitreten  
• 213.19.144.110 (Amsterdam)  
• Niederlande)  
• 213.244.140.110 (Deutschland)

Meeting-ID: 618 7653 6967  
Kenncode: 58613689

## Leistungen in Bezug auf das Modul

**PNL** 557251 - Vorlesung und Übung (unbenotet)

| 104320 VU - Declarative Problem Solving and Optimization |     |      |               |          |                   |            |                                                                           |
|----------------------------------------------------------|-----|------|---------------|----------|-------------------|------------|---------------------------------------------------------------------------|
| Gruppe                                                   | Art | Tag  | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                                 |
| 1                                                        | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.10         | 20.10.2023 | Prof. Dr. Torsten Schaub                                                  |
| 1                                                        | V   | Fr   | 12:00 - 16:00 | wöch.    | 2.70.0.11         | 03.11.2023 | Prof. Dr. Torsten Schaub                                                  |
| 1                                                        | U   | N.N. | N.N.          | wöch.    | N.N.              | N.N.       | Javier Romero Davila,<br>Francois Laferriere, Prof.<br>Dr. Torsten Schaub |

Times and Dates will be announced by the lecturer.

### Kommentar

Answer Set Programming (ASP) is a prime approach to declarative problem solving. Although initially tailored to modeling problems in the area of Knowledge Representation and Reasoning (KRR), its attractive combination of a rich yet simple modeling language with high-performance solving capacities has sparked interests in academia and industry way beyond KRR. This course presents a detailed introduction to ASP, aiming at using ASP languages and systems for solving application problems. Starting from the essential formal foundations, it introduces ASP's solving technology, modeling language and methodology, while illustrating the overall solving process by practical examples.

### Voraussetzung

Motivation.

### Literatur

- Answer Set Solving in Practice by Martin Gebser, Roland Kaminski, Benjamin Kaufmann, and Torsten Schaub. Synthesis Lectures on Artificial Intelligence and Machine Learning, Morgan and Claypool
- Potassco User Guide by the Potassco team, <https://github.com/potassco/guide/releases>
- Answer Set Programming by Vladimir Lifschitz. Springer
- Knowledge Representation, Reasoning, and the Design of Intelligent Agents: The Answer-Set Programming Approach by Michael Gelfond and Yulia Kahl. Cambridge University Press

### Leistungsnachweis

Marked exam and assignments

### Bemerkung

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Questions can be addressed to [asp@lists.cs.uni-potsdam.de](mailto:asp@lists.cs.uni-potsdam.de)

A tutorial introduction to answer set programming, used in the projects, is given separately.

### Lerninhalte

- Motivation
- Introduction
- Modeling
- Language
- Grounding
- Foundations
- Solving
- Advanced modeling

### Kurzkommentar

We start on Friday 20th of October at 12:00. More information about the course can be found at [Moodle](#) . - cu

### Zielgruppe

This is an introductory lecture for MSc students with varying backgrounds.

### Leistungen in Bezug auf das Modul

**PNL** 557251 - Vorlesung und Übung (unbenotet)

| 104331 DF - Knowledge-Based Configuration |     |     |               |          |                   |            |                                                 |
|-------------------------------------------|-----|-----|---------------|----------|-------------------|------------|-------------------------------------------------|
| Gruppe                                    | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                       |
| 1                                         | VU  | Mo  | 16:00 - 18:00 | wöch.    | 2.70.0.08         | 16.10.2023 | Prof. Dr. Torsten Schaub,<br>Balázs Amadé Nemes |

**Kommentar**

A Configuration task requires us assemble an artifact from instances of a fixed set of well component types which can be composed conforming to a set of constraints. In this course, students will familiarize themselves with the literature on solving configuration tasks using knowledge-based approaches.

The course organization happens via the [course moodle page](#).

**Leistungen in Bezug auf das Modul**

PNL 557251 - Vorlesung und Übung (unbenotet)

**104336 VU - Multimedia-Technologie**

| Gruppe | Art | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                   |
|--------|-----|-----|---------------|----------|-------------------|------------|-----------------------------|
| Alle   | V   | Di  | 08:00 - 10:00 | wöch.    | 2.70.0.11         | 17.10.2023 | Prof. Dr.-Ing. Ulrike Lucke |
| 1      | U   | Di  | 10:00 - 12:00 | wöch.    | 2.70.0.10         | 17.10.2023 | Axel Wiepke                 |
| 2      | U   | Do  | 12:00 - 14:00 | wöch.    | 2.70.0.10         | 19.10.2023 | Florian Reuß                |

**Kommentar**

Die Vorlesung Multimedia-Technologie vermittelt einen Einstieg in die Grundlagen, Verfahren, Komponenten und Systeme multimedialer Datenverarbeitung. Das beginnt bei der digitalen Speicherung von Informationen, geht über die Übertragung und Verarbeitung dieser Daten und endet mit Ansätzen zur Darstellung von bzw. Interaktion mit digitalen Medien. Das schließt sowohl statische (z.B. Grafik, Text) als auch dynamische (z.B. Audio, Video) Medientypen ein. Die Vorlesung behandelt theoretisches Überblickswissen, das in den Übungen praktisch erprobt und auf verschiedene Anwendungsfälle übertragen wird. Begleitend wird im Rahmen einer Praxisaufgabe ein eigenes Multimediaangebot vertiefend betrachtet und evaluiert. Es wird ein grundlegendes Verständnis für die digitale Informationsverarbeitung vorausgesetzt. Daher eignet sich die Veranstaltung insbesondere für Studienanfänger der Informatik sowie als Neben-/Beifach.

**Voraussetzung**

grundlegendes Verständnis für die digitale Informationsverarbeitung

**Literatur**

wird in der Lehrveranstaltung bekannt gegeben

**Leistungsnachweis**

wird in der Lehrveranstaltung bekannt gegeben

**Leistungen in Bezug auf das Modul**

PNL 557251 - Vorlesung und Übung (unbenotet)

**MAT-DSAM2A - Advanced Statistical Data Analysis A**

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

**MAT-DSAM2B - Advanced Statistical Data Analysis B**

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

**MAT-DSAM3A - Advanced Data Assimilation and Modeling A**

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

**MAT-DSAM3B - Advanced Data Assimilation and Modeling B**

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

**MAT-DSAM8A - Mathematical Foundations of Data Science A**

Für dieses Modul werden aktuell keine Lehrveranstaltungen angeboten

**MAT-DSAM8B - Mathematical Foundations of Data Science B**

| 104688 S - Diskrete Spektralgeometrie |                                          |     |               |          |                   |            |                                                              |
|---------------------------------------|------------------------------------------|-----|---------------|----------|-------------------|------------|--------------------------------------------------------------|
| Gruppe                                | Art                                      | Tag | Zeit          | Rhythmus | Veranstaltungsort | 1.Termin   | Lehrkraft                                                    |
| 1                                     | S                                        | Mi  | 12:15 - 13:45 | wöch.    | N.N.              | 18.10.2023 | Prof. Dr. Matthias Keller,<br>Dr. rer. nat. Siegfried Beckus |
| Raum 2.09.0.17                        |                                          |     |               |          |                   |            |                                                              |
| Leistungen in Bezug auf das Modul     |                                          |     |               |          |                   |            |                                                              |
| PNL                                   | 551322 - Vorlesung und Übung (unbenotet) |     |               |          |                   |            |                                                              |

# Glossar

Die folgenden Begriffserklärungen zu Prüfungsleistung, Prüfungsnebenleistung und Studienleistung gelten im Bezug auf Lehrveranstaltungen für alle Ordnungen, die seit dem WiSe 2013/14 in Kraft getreten sind.

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Prüfungsleistung</b>      | Prüfungsleistungen sind benotete Leistungen innerhalb eines Moduls. Aus der Benotung der Prüfungsleistung(en) bildet sich die Modulnote, die in die Gesamtnote des Studiengangs eingeht. Handelt es sich um eine unbenotete Prüfungsleistung, so muss dieses ausdrücklich („unbenotet“) in der Modulbeschreibung der fachspezifischen Ordnung geregelt sein. Weitere Informationen, auch zu den Anmeldeöglichkeiten von Prüfungsleistungen, finden Sie unter anderem in der <a href="#">Kommentierung der BaMa-O</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Prüfungsnebenleistung</b> | Prüfungsnebenleistungen sind für den Abschluss eines Moduls relevante Leistungen, die – soweit sie vorgesehen sind – in der Modulbeschreibung der fachspezifischen Ordnung beschrieben sind. Prüfungsnebenleistungen sind immer unbenotet und werden lediglich mit "bestanden" bzw. "nicht bestanden" bewertet. Die Modulbeschreibung regelt, ob die Prüfungsnebenleistung eine Teilnahmevoraussetzung für eine Modulprüfung oder eine Abschlussvoraussetzung für ein ganzes Modul ist. Als Teilnahmevoraussetzung für eine Modulprüfung muss die Prüfungsnebenleistung erfolgreich vor der Anmeldung bzw. Teilnahme an der Modulprüfung erbracht worden sein. Auch für Erbringung einer Prüfungsnebenleistungen wird eine Anmeldung vorausgesetzt. Diese fällt immer mit der Belegung der Lehrveranstaltung zusammen, da Prüfungsnebenleistung im Rahmen einer Lehrveranstaltungen absolviert werden. Sieht also Ihre fachspezifische Ordnung Prüfungsnebenleistungen bei Lehrveranstaltungen vor, sind diese Lehrveranstaltungen zwingend zu belegen, um die Prüfungsnebenleistung absolvieren zu können. |
| <b>Studienleistung</b>       | Als Studienleistung werden Leistungen bezeichnet, die weder Prüfungsleistungen noch Prüfungsnebenleistungen sind.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |



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