

# COURSE DETAIL

## INTRODUCTION TO ARTIFICIAL INTELLIGENCE

**Country**

Germany

**Host Institution**

Technical University Berlin

**Program(s)**

Technical University Berlin

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

121

**UCEAP Course Suffix**

D

**UCEAP Official Title**

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

**UCEAP Transcript Title**

INTRO TO AI

**UCEAP Quarter Units**

5.50

**UCEAP Semester Units**

**Course Description**

In this course, students gain an integrative understanding of the field of Artificial Intelligence (AI), with equal emphasis on data-driven AI (especially machine learning) and model-based AI (especially planning and reasoning). They come to understand AI from the perspectives of decision theory, machine learning, optimization, and classical problem solving. Students learn to independently implement and understand core algorithms from these areas and can identify appropriate problem formulations and AI algorithms for a given application. Course topics include problem formulations and algorithmic approaches from decision theory (including reinforcement learning, multi-armed bandits, control theory), machine learning, optimization, and inference, classical planning, and problem solving. The class also discusses fundamental and recurring algorithmic principles such as dynamic programming, optimization-based vs. sampling-based methods, and decision trees.

**Language(s) of Instruction**

German

**Host Institution Course Number**

41048

**Host Institution Course Title**

EINFÜHRUNG IN DIE KÜNSTLICHE INTELLIGENZ

**Host Institution Course Details**

<https://moseskonto.tu-berlin.de/moses/modultransfersystem/bolognamodule/beschre...>

**Host Institution Campus****Host Institution Faculty**

**Host Institution Degree**

**Host Institution Department**

Institut für Technische Informatik und Mikroelektronik

**Course Last Reviewed**

2024-2025

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