Open microcredentials on AI, designed with recognition and curriculum integration in mind, for use in HE, VET & LLL

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December 2023
In Germany, 90% know the term AI. Only 29% of them are confident in explaining AI.¹

By 2026, Germany will lack 780,000 people with tech skills.²

Our vision:
An AI-competent society.
Why the AI Campus?

➢ Germany is struggling with a severe shortage of skilled workers and is in danger of losing its global competitiveness.

➢ Everyone in society needs to better understand possibilities and limitations of AI.

➢ Thus, the AI Campus is part of the AI Strategy and the Digital Strategy of the German Federal Government.

Context

Duration

Goals

➢ R&D project: October 2019 to December 2024.

➢ Independent initiative from 2025 onwards.

➢ Educate 100,000 people on Artificial Intelligence & Data Literacy by 2025.

➢ Support more than 100 HEIs in Europe with AI learning by 2030.
AI Campus: A digital learning platform on AI

www.ai-campus.org/overview
Who are the target groups?

Students
Professionals
Lifelong Learners
Which skills and subject domains are in focus?

Data Literacy

AI Basics

Machine Learning

Medicine

Education

Industry
**What do learners need?**

**Digital formats depend on their learning objectives**

(& not everything needs to be assessed & certified)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Digital formats</th>
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<tbody>
<tr>
<td>Information &amp; Knowledge</td>
<td>Micro formats (podcasts, videos, blog posts, publications, …)</td>
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<tr>
<td></td>
<td>Online courses / MOOCs (mainly informative or basic knowledge)</td>
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<td></td>
<td>Online events / livestreams</td>
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<tr>
<td>Skills</td>
<td>Micro learning formats (simulations, learning videos, programming exercises, …)</td>
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<td></td>
<td>Online courses / MOOCs</td>
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<tr>
<td></td>
<td>Blended learning formats (courses, trainings, workshops, …)</td>
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<tr>
<td>Qualifications &amp; Certificates</td>
<td>Digital badges</td>
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<td></td>
<td>Micro credentials &amp; micro degrees</td>
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<td></td>
<td>Online and blended study programmes</td>
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**Communication & Public Relations**

**Learning opportunities**
Where do we stand?
Some facts and figures:

>50 Partners for the development of learning opportunities

>23.000 Profiles on the AI Campus

>30.000 Downloads & Streams of AI Campus podcasts

>500.000 Individual Visitors on the AI Campus website

>2 Millionen Views on YouTube and Vimeo

March 2023
Micro-Credentials & Micro-Degrees
**Context in Germany**

**Germany**: Increasing discussion on Micro-Credentials and/or Micro-Degrees as a flexible and innovative form of qualification

- "Higher education institutions are recommended to examine the potential of micro-certifications and badges for their higher education teaching." (HRK, 2020)

- **Federal government wants to “examine” the introduction of micro-degrees within the framework of continuing academic education (SPD et al., 2021)**

  ➢ Connecting the „AI skills“ context with the „Micro-Credentials“ context
  ➢ “AI Campus 2.0“ as a laboratory for experimentation and implementation
Micro-Credentials & Micro-Degrees on the AI Campus

• Orientation towards the German Rectors' Conference (2020), UNESCO (Oliver, 2021) and the European Commission (2020)

• **Micro-Degrees** = A set or *aggregation of shorter learning units with stackable content* (AI Campus courses that are certified with a Micro-Credential).

• **Micro-Credentials** = Certified digital learning unit with 4 key requirements

  - Demonstration of Learning Outcome (Knowledge / Skill)
  - Transparent Assessment
  - Stand-alone Value
  - Quality Assurance
Records of Achievement

• An AI Campus record of achievement is awarded to those who have achieved at least 60 percent of the total number of points in the sum of all assessed tasks of an online course on the learning platform ("Basic Setting").

• Higher Education Collaboration (University of Bonn)
  • 2 ECTS (Online Course + Onsite Exam) Studium Generale (free electives) in medicine

• Further Education Collaboration (State Medical Chamber of Baden-Württemberg)
  • 12 Credits in Continuing Medical Education (Online Course + Online Exam)
**AI Campus – the Learning Platform for Artificial Intelligence**

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**Licenses & certifications**

**Daten- und Algorithmenethik**
AI Campus – The Learning Platform for Artificial Intelligence
Issued Nov 2022
Credential ID: KI-Campus
Show credential

**Dr. med. KI - Clinics**
AI Campus – The Learning Platform for Artificial Intelligence
Issued Jun 2022
Credential ID: KI-Campus
Show credential

**Dr. med. KI - Basics**
AI Campus – The Learning Platform for Artificial Intelligence
Issued Jan 2022
Credential ID: KI-Campus
Show credential

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**Certificate Verification**

The certificate for the verification code: xiros-nimuc-bulep-nikeh-kifta is valid.

KI-Campus verifies that the candidate completed the course **Dr. med. KI - Clinics** and passed the necessary exercises and exams to earn a course certificate.

Gain a **Record of Achievement** by earning at least 60% of the maximum number of points from all graded assignments.

Find out more in the **certificate guidelines**.

**User Info**
Issued for: Mike Bernd

**Certificate Info**
Certificate type: Record of Achievement
Issued at: 2022-06-30
Result: 177.1 of 120.0 points (97.6%)
Micro-Degrees on the AI Campus

I + II + III = Micro-Degree

At least 3 courses with stackable content (specialisation)
Workload 90-150 hours for entire MD
Certificate of Achievement (MC) per course
Fulfilment of the 4 criteria for MC
Currently optional award of ECTS credits

(Flasdick et al. 2021)
Example 1: AI_VET

**KURS**
AI_VET I – KI im Kontext von Lehren und Lernen
Universität Mannheim
Universität Stuttgart
Prof. Dr. Dirkльntenthaler
Prof. Dr. Kristina Kögler

dauerzeit

**KURS**
AI_VET II – Learning Analytics
Universität Mannheim
Universität Stuttgart
Prof. Dr. Dirkльntenthaler
Prof. Dr. Kristina Kögler

dauerzeit

**KURS**
AI_VET III – KI als Inhalt der beruflichen Bildung
Universität Mannheim
Universität Stuttgart
Prof. Dr. Dirkльntenthaler
Prof. Dr. Kristina Kögler

dauerzeit

**KURS**
AI_VET IV – KI als Werkzeug in der beruflichen Bildung
Universität Mannheim
Universität Stuttgart
Prof. Dr. Dirkльntenthaler
Prof. Dr. Kristina Kögler

dauerzeit

Micro-Credentials
(approx. 25-50 hours each)

Micro-Degree
(approx. 150 hours)
European Digital Credentials for Learning (EDC)
Key Learnings from Practice

1) **Focus on the knowledge & skills gap:**
   AI as a topic helps with the acceptance and recognition of micro-credentials in higher and in further education.

2) **Keep it simple:**
   Don’t overthink the basic quality standards and make it understandable to non-experts (e.g. in industry).

3) **Keep it flexible:**
   Different sectors have different needs. We cannot impose all our academic standards on non-formal education.

4) **Collaborate:**
   One of the great potentials of open and inclusive (digital) learning units certified with micro-credentials is collaboration. Implement them in strong networks!
Common Microcredential Framework (CMF)
1) **The CMF is a collaborative effort by leading European online education providers:**

The CMF enables the creation of high-quality MOOCs (Massive Open Online Courses) across various European languages and offers academic credits based on the European Qualification Framework (EQF) and other recognized national qualification frameworks. It unifies qualification standards, promoting transparency and cross-border recognition of qualifications within Europe’s higher education institutions.

2) **To meet the requirements of the CMF, microcredentials must meet the following specifications**

1. Has a **workload** (or study time) of 4-6 ECTS (100–150 hours)
2. Be levelled at **Levels 5–8 in the European Qualification Framework**
3. Provides a **summative assessment that awards academic credit**
4. Uses a **reliable method of ID verification**
5. Provides a **transcript** with the learning outcomes, study hours required, EQF level, and number of credit points.
Challenges
Challenges

1) **Assessment:**
Recognition and portability of competences require transparent and secure assessment of learning outcomes. AI Campus is experimenting with several scenarios, such as
- on-site assessment
- online assessment with proctoring
- online assessment without ID verification
- issuing only certificates of participation, leaving the assessment to the recognizing institution

2) **Reviewing and updating Learning opportunities:**
The fast pace of development in the field requires courses, assessments and credentials to be regularly reviewed and updated.

3) **AI competence framework:**
To foster interdisciplinary collaboration and to develop a competence framework on AI, a research group is bringing together researchers with various backgrounds.
Funding
Partners “AI Campus 2.0”
Our mission: We strengthen AI skills through innovative, digital learning opportunities.

Let’s work together!