

XHEIE credential metadata

Visions and semantic challenges for
credential metadata exchange

9th of September 2020, Martin Herzog]init[AG

Setup for XHEIE metadata exchange

- Need: comply with “Act to Improve Online Access to Administrative Services (OZG)”
- Data model based on Europass Learning Model
- Enrich model with metadata specifically required for
 - German higher education ecosystem
 - German administrative services

Use case: Issue a credential using XHEIE

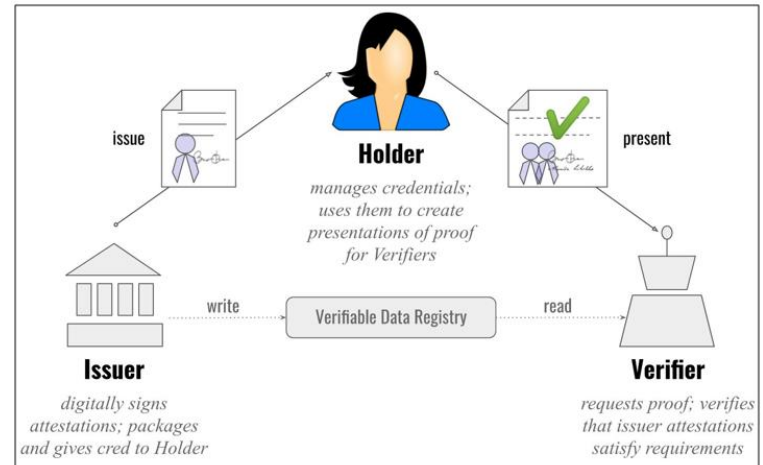
- HEI will issue digital certificates to students using an open standard (XHEIE)
- XHEIE credential metadata will be automatically created by Campus Management Systems in Germany
- Corresponding credentials in native Europass and ELM0 format can be exported automatically as well

Metadata exchange with XHEIE

- Multi lingual and machine readable standard, no media discontinuity
- Includes domain expert knowledge not only from Higher Education, but the German Education domain in general (ISCED Level 0 to ISCED Level 8)
- State of the art metadata standard
- In line with eIDAS / SDG / OZG / GDPR
- "Application profile" based on international specifications

Student's benefits of credentials issued using XHEIE

- *Apply for a job*
- Enroll in study programs
- Recognition of academic degrees
- Apply for health insurance for students
- Apply for a specific loan for education
- Apply for housing benefits
- Apply for scholarship funds
- ...



Transcript of Records

Familienname/Family Name:	Vorname(n)/First Name(s):
Mustermann	Erika
Geburtsdatum/Date of Birth:	Geschlecht/Sex:
12 August 1984 12 August 1984	weiblich female
Geburtsort/Place of Birth:	Matrikelnummer/Student ID Number:
Berlin	03624050



SACHSEN-ANHALT



Federal Ministry
of Education
and Research



```
<!-- Weitere XHochschule-spezifische Angaben -->
<xhs:student>
  <xhs:matrikelnummer>03624050</xhs:matrikelnummer>
  <!-- Angabe des Studienfachs -->
  <xhs:studienfach>
    <!-- Elektrotechnik und Informationstechnik
    - Fächerschlüssel 157 -->
    <code>157</code>
  </xhs:studienfach>
</xhs:student>
```

```
<!-- Angaben zum Zeugnisinhaber und der erbrachten Leistungen -->
<eup:credentialSubject id="urn:example:person:0001">
  <!-- Beliebige Nationale Personen ID (wird von EDCI verlangt) -->
  <eup:nationalId spatialID="http://publications.europa.eu/resource/authority/country/1A0">nationalId0</eup:nationalId>
  <eup:fullName>
    <eup:text lang="de" content-type="text/html">Erika Mustermann, geborene Gabler</eup:text>
  </eup:fullName>
  <eup:givenNames>
    <eup:text lang="de" content-type="text/html">Erika</eup:text>
  </eup:givenNames>
  <eup:familyName>
    <eup:text lang="de" content-type="text/html">Mustermann</eup:text>
  </eup:familyName>
  <eup:dateOfBirth>1984-08-12</eup:dateOfBirth>
  <eup:placeOfBirth>
    <eup:name>
      <eup:text lang="de" content-type="text/html">Berlin</eup:text>
    </eup:name>
  </eup:placeOfBirth>
```

2. Qualification

2.1 Name of Qualification (full, abbreviated; in original language)

Master of Science (M.Sc.)

Title Conferred (full, abbreviated; in original language)

This academic degree may also be used as follows:
'Master of Science (TUM)' or 'M.Sc. (TUM)'.

2.2 Main Field(s) of Study

Electrical Engineering and Information Technology



SACHSEN-ANHALT



Federal Ministry
of Education
and Research



```
<!-- Angabe des Studienfachs -->  
<xhs:studienfach>  
  <!-- Elektrotechnik und Informationstechnik  
  - Fächerschlüssel 157 -->  
  <code>157</code>  
</xhs:studienfach>
```

```
<!-- Angabe des Studienfachs als Text und als ISCED-F Code (siehe Diploma Supplement Nr. 2.2) -->  
<eup:hasISCED-FCode uri="http://data.europa.eu/snb/isced-f/0713" targetFrameworkUrl="http://data.europa.eu/snb/isced-f/">  
  <eup:targetName>  
    <eup:text lang="en" content-type="text/html">0713</eup:text>  
  </eup:targetName>  
  <eup:targetDescription>  
    <eup:text lang="en" content-type="text/html">Electricity and energy</eup:text>  
  </eup:targetDescription>  
  <eup:targetFrameworkName>  
    <eup:text lang="en" content-type="text/html">ISCED-F</eup:text>  
  </eup:targetFrameworkName>  
</eup:hasISCED-FCode>
```



Zuordnung der ISCED-F 2013 Codes zu den Studienfächern der Humboldt-Universität zu Berlin

(Stand: Dezember 2019)

Quelle: ISCED-F 2013 search tool verfügbar unter https://ec.europa.eu/education/international-standard-classification-of-education-isced_en

Studienfach der HU Berlin	ISCED-F 2013 Code	ISCED Field of Education
Afrikawissenschaften	0314	Sociology and cultural studies
Agrar- und Gartenbauwissenschaften	0800	Agriculture, forestry, fisheries and veterinary
Agrarökonomik (Agricultural Economics)	0800	Agriculture, forestry, fisheries and veterinary
Agrarwissenschaften	0800	Agriculture, forestry, fisheries and veterinary
Agricultural Economics	0800	Agriculture, forestry, fisheries and veterinary
Alte Geschichte	0222	History and archaeology
Amerikanistik	0231	Language acquisition
Anglistik	0231	Language acquisition
Archäologie und Kulturgeschichte Nordostafrikas	0222	History and archaeology
Archäologie und Kulturwissenschaft	0222	History and archaeology
Arid Land Studies	0800	Agriculture, forestry, fisheries and veterinary
Betriebliches Rechnungswesen	0410	Business and administration not further defined
Betriebswirtschaftslehre	0410	Business and administration not further defined
Bibliotheks- und Informationswissenschaft	0322	Library, information and archival studies
Biodiversity Management and Research	0800	Agriculture, forestry, fisheries and veterinary
Biologie	0511	Biology
Biophysik	0511	Biology



- Mapping of taxonomies will be a continuing semantic challenge
- Aim: Facilitate and bundle activities started by single HEI already

Thank you for your attention!
Further information available at:

www.XHEIE.eu
www.XHochschule.de
www.XBildung.de

