DIGITAL HUMANITIES

EPFL

Jazz Luminaries @ EPFL Pavilions, © Catherine Leutenegger, 2019

A human-centric and interdisciplinary approach to technology is the most powerful method we have for fostering creativity, asking relevant questions and ultimately making better decisions for our future. The Master of Science in Digital Humanities offers future engineers the unique opportunity to pair a rigorous technical education with a deeper understanding of user experience, cultural and social contexts as well as real-world application of digital tools.

The power of data, the depth of culture

A digital transformation is well underway across the globe, creating mountains of data across all sectors and bringing with it unique sets of challenges. Interpreting this data into socially and economically relevant information necessitates a wide range of skills in both computer science and humanities. The diverse backgrounds of the EPFL digital humanities faculty are uniquely positioned to provide this type of interdisciplinary training.

Our society is shaped with data primarily produced, consumed, and curated by people, from cultural and social media to historical and urban data.

Digital humanities engineers have the advantage of pairing technical skills in computer and data science with the applied interdisciplinary understanding needed to pursue a broader range of career opportunities.

There currently exists a gap between specialists with strong technical skills and leaders with a depth of cultural understanding, critical approach and creative mindset required to make impactful decisions. Individuals who can bridge this gap are rare and in high demand, and the EPFL Digital Humanities Master's is training engineers who are well placed to take advantage of these positions.

Montreux Jazz Heritage Lab @ EPFL Pavilions, © Marc Ducrest, 2016

Hakim Invernizzi:
"I really enjoyed the flexibility offered by the Digital Humanities Master's program. In a single year, I was able to take my first steps in the data science industry and also work on a meaningful academic project abroad."

Applied learning, real-world projects

At EPFL, digital humanities engineers master data analysis and visualization, audio and image processing, machine learning and more. In addition to these technical skills, they also learn how to manipulate, visualize and interpret data to make informed decisions grounded in a deeper understanding of user experience and the global and societal issues present in any academic, cultural or industrial process.

To help future engineers to take the next step in their careers, the EPFL Digital Humanities Master's program incorporates extensive use of applied learning via projects and work in teams. These dynamics not only offer the best preparation for real-world situations but also encourage sharing and growth within gender and culturally diverse classes.

EPFL is a world-class university conducting high-impact digital humanities projects like Time Machine Europe and the Montreux Jazz Archive, and EPFL Pavilions, which are located at the heart of the campus, provide a unique platform to develop and experience the most innovative technologies for immersion and interactivity. All future digital humanities engineers will have the opportunity to take part in similar projects covering a broad range of fields and creative industries.

© Antoine Tardy

Jenny Paola Yella Bello:
"The EPFL Digital Humanities Master's provided me with a strong technical expertise and an awareness of the capabilities and limitations of computational methods when applied in the humanities and social sciences, both of which are of great relevance for my employer in the humanitarian sector."
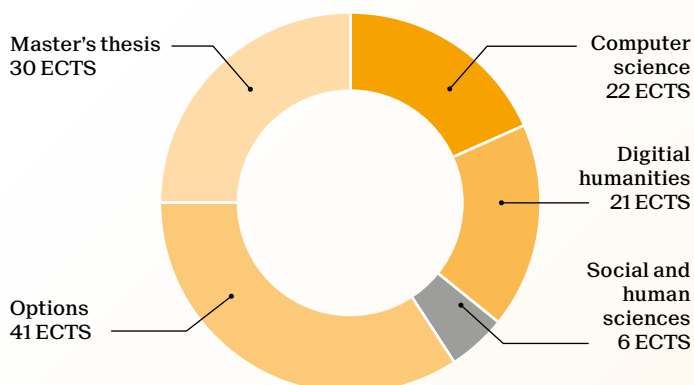
Master of Science in
DIGITAL HUMANITIES
2-year program – 120 ECTS

Master's thesis
30 ECTS

Computer science
22 ECTS

Digitial humanities
21 ECTS

Social and human sciences
6 ECTS

Options
41 ECTS

	ECTS
Computer science	**22**
Applied data analysis	8
Computational social media	4
Foundations of digital humanities	6
Machine learning for DH	4

	ECTS
Digital humanities	**21**
Cultural data sculpting	5
Design research for digital innovation	5
Digital musicology	6
History and the digital	5

	ECTS
Options	**41**
Advanced computer graphics	6
Artificial neural networks /reinforcement learning	6
Automatic speech processing	3
Causal inference	4
Causal thinking	5
Computational photography	6
Computers and music	6
Computer vision	6
Data visualization	6
Decision-aid methodologies in transportation	4
Deep learning	4
Design in innovation: creation for adoption	4
Digital education	6
Distributed information systems	6
Ethics and law of AI	4
Experience design	6
Exploratory data analysis in environmental health	4
Foundations of data science	8
Game design and prototyping	4
Image and video processing	6
Image processing I, II	6
Image processing for earth observation	4
Interaction design	6
Introduction au BIM (Building Information Modeling)	3
Introduction to natural language processing	6
Linear models	5
Machine learning	8
Machine learning for behavioral data	6
Media security	6
Modern natural language processing	8
Semester project in digital humanities	12
Strategic marketing and technology commercialization	4
Technology and innovation strategy	3
UE H: Graphie	4
UE J: Territoire et paysage	4
UE R: Introduction au BIM (Building Information Modeling)	4
UE V: Visions et utopies	4
Virtual reality	6
Visual intelligence: machines and minds	6

	ECTS
Social and human sciences	**6**
SHS introduction to project	3
SHS project	3

Internship

The program includes a compulsory 8-week to 6-month industrial internship, which can be combined with the Master's thesis.

Internship testimonials

Digital Humanities student testimonials

Career prospects

EPFL digital humanities engineers, having both advanced technical skills and a broad interdisciplinary approach, are ready to make an impact, from creative industries to information and communication technologies (ICT) to cultural heritage.

In addition to standard ICT career opportunities, a broad range of additional positions are for instance: user experience designer, data journalist, artificial intelligence specialist for the creative industries (media, music, video games, fashion), data scientist in the humanitarian sector and numerous academic careers in the growing field of the digital humanities.

Admission requirements

Interested students must have a Bachelor's degree in a science, technology, engineering, or mathematics (STEM) discipline with excellent records and a solid understanding of programming, algebra, statistics, and signal processing. Students must also express an active interest in culture and humanities through previous studies, extracurricular activities or personal projects.

go.epfl.ch/master-digital-humanities
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