Digital Skills for Healthcare Transformation

Student recruitment handbook (full version) 2023-2026

DS4Health

www.digitalskills4health.eu

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A word from the DS4Health Project Coordinator

Dear Prospective DS4Health Student,

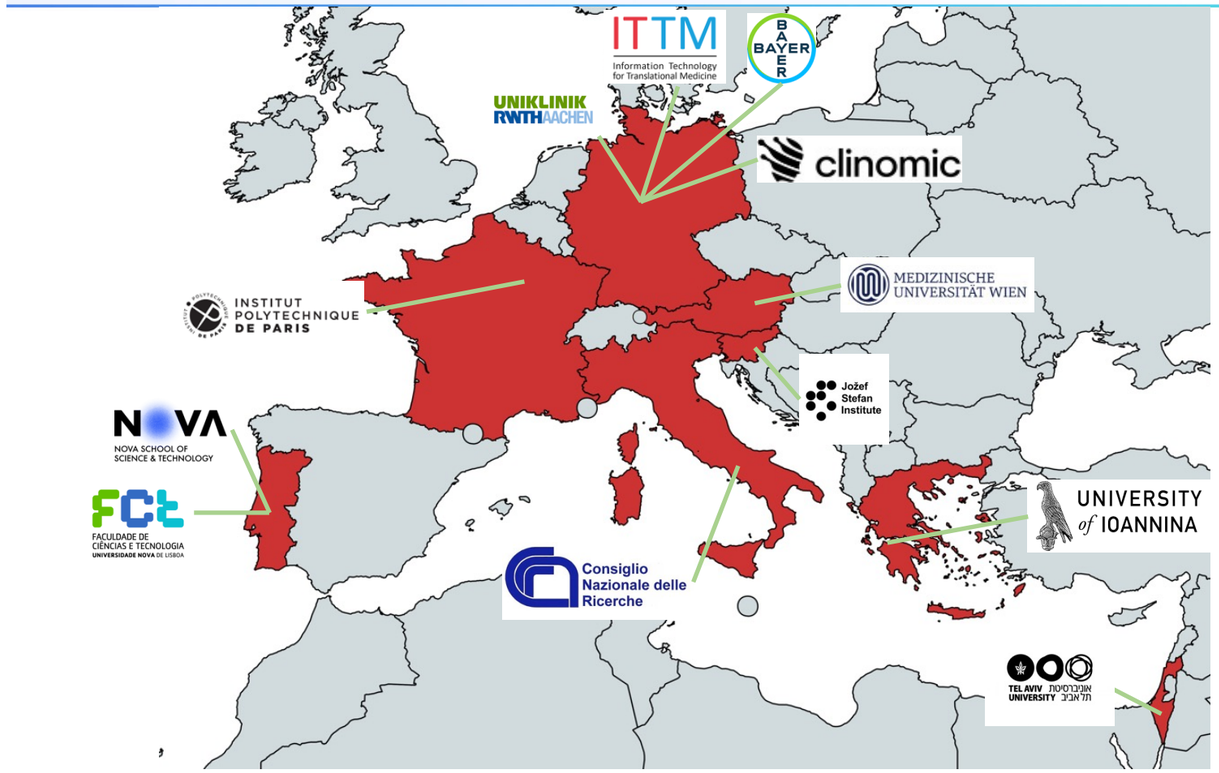
It is with great pleasure and a profound sense of purpose that I introduce our international Master's program in Digital Skills for Healthcare Transformation (DS4Health). As the Head of the Department of Intensive Care Medicine, I have witnessed firsthand the rapid evolution of healthcare and the critical role that digital skills play in reshaping our industry. In today's dynamic healthcare landscape, the need for professionals who possess the knowledge and expertise to harness the power of digital technology is more pressing than ever. We are in a new era of healthcare, characterized by groundbreaking advancements in medical science and an unprecedented level of interconnectedness. Digital technology has emerged as the linchpin in this transformative journey, enabling us to deliver higher quality care, improve patient outcomes, and streamline operations. The DS4Health Master's program is designed to prepare the next generation of healthcare leaders to navigate and excel in this ever-changing landscape.

This program represents a unique collaboration between leading academic institutions and industry experts across many countries, fostering a rich learning environment that seamlessly integrates theory and practice. By offering a comprehensive curriculum that delves into data analytics, telemedicine, artificial intelligence, and digital health systems, this program equips students with the essential knowledge and skills required to drive innovation and optimize healthcare delivery. The Recruitment Handbook you are holding in your hands is your gateway to understanding the vast opportunities and experiences that await you as a prospective student. It provides a detailed overview of our international DS4Health Alliance as well as the program's structure, admission requirements, and the caliber of faculty members who will guide you on this transformative journey. I extend my heartfelt gratitude to the dedicated faculty and staff across the DS4Health Alliance who have worked tirelessly to create this exceptional program, and I welcome all those who choose to embark on this transformative journey with us. Together, we can advance healthcare and improve the lives of countless individuals around the world.

Sincerely,

Univ.-Prof. Dr. Gernot Marx, FRCA
Head of the Department of Intensive Care Medicine
University Hospital RWTH Aachen
Coordinator for the DS4Health Project

The DS4Health alliance



The six MSc programs are under the umbrella of the **EU's Digital Europe program Digital Skills for Healthcare Transformation (DS4Health). Each member of the DS4Health alliance** has its own long-standing history and is ready to provide its expertise to all students that apply for the MSc program. DS4Health aims to improve higher education for healthcare professionals in digital skills and deepen insight in design, use, and development of digital technologies to form a modern, ethically responsible, efficient and citizen-centered healthcare. The program considers specifically soft skills, entrepreneurship and a citizen-centered, application-driven co-design approach supporting the aim the digital agenda, and societal challenges as addressed in European Pillar of Social Rights principles on health, inclusion and care and Sustainable Development Goals. DS4Health will increase the options for students to be trained in advanced technologies with a clear view on digital transformation of healthcare towards a healthcare digital ecosystem. Embark on a transformative journey with the DS4Health master program, **seamlessly blending theory with hands-on experience in real-world health settings.**

Join forces with leading experts from academia and industry in the dynamic field of digital health, fostering collaboration and synergy. Gain valuable insights into emerging technologies, understanding their impact and unlocking incentives in daily healthcare practices. This program is meticulously designed to empower you with unique skills and competencies, cultivating technical

prowess and analytical finesse essential for senior roles in healthcare technology. Completing the DS4Health master program is your key to elevating your career in the healthcare domain, providing the tools and knowledge to thrive in the fast-paced world of digital health.

Six Universities host the MSc programs. These are:

University Hospital and Medical Faculty at the RWTH Aachen (UKA)

https://www.ukaachen.de

The University Hospital and Medical Faculty at the RWTH Aachen (UKA) is a tertiary care hospital at the university level. Since 1985, 34 departments with ca. 1400 beds, 25 institutes and five interdisciplinary units cover the whole medical field. Additionally, patient-centred medicine, teaching and research are being performed at an international level. The UKA is located in Germany, near to Belgium and the Netherlands. It offers superior expertise in intensive care, being the national centre of excellence. The Department of Intensive Care (DIC) comprises 103- beds treating more than 5,000 critically ill patients per year. Moreover, DIC has several experimental and clinical research groups with special expertise including Sepsis, Telemedicine, and Digital Health. The development of innovative, telemedical solutions is part of the mid to long-term strategy of UKA, the federal state of North-Rhine-Westphalia and its authorities. The role of UKA unites special expertise in both digital skills and critical care. The experience **is incorporated in student's courses in digital skills and medicine.**

Tel Aviv University (TAU)

https://english.tau.ac.il

Tel Aviv University (TAU) is the largest comprehensive research university in Israel, with around 30,000 students and 4,000 faculty members. Comprising 9 faculties, 27 schools and 105 departments, TAU has over 100 research centres and institutes. The University enjoys extensive research contacts with leading academic and scientific institutions abroad, including over 150 cooperation agreements with universities in North and South America, Europe and Asia, and has participated in many EU-funded research projects (including ERC's) in various fields. The Sackler Faculty of Medicine at TAU is Israel's largest medical research and training complex. The faculty trains 1200 M.D students from Israel, USA, and Canada, as well as 200 dental medicine students and additional 2,000 students enrolled in the health profession programs. Sackler's Graduate School for Advanced Studies trains approximately 800 M.Sc. and Ph.D. students with an emphasis on a multidisciplinary approach and application of fundamental knowledge to important biomedical knowledge. These include dedicated websites for teaching anatomy, 3D modelling using photogrammetry techniques, Virtual Reality environment to simulate real-life dissection labs, Computerized Tomography portal and ultrasound simulators, etc. The faculty places special emphasis on online/hybrid teaching and implementing advanced technological aids into medical training.

Institut Polytechnique de Paris (IPP)

https://www.ip-paris.fr/en

The Institut Polytechnique de Paris (IPP) is a public higher education and research institution that brings together five prestigious French engineering schools: École Polytechnique, ENSTA Paris, ENSAE Paris, Télécom Paris and Télécom SudParis. Under the auspices of the Institute, they share their bicentennial combined expertise to fulfil two major ambitions: to develop training programs of excellence and cutting-edge research. Institut Polytechnique de Paris offers multidisciplinary training with more than 800 researchers, and 31 research labs. IP Paris also benefits from an important industrial connection, allowing the development of industrial partnerships in particular with industrial R&D laboratories in the Saclay region. IP Paris will take part in the project through the Department of Computer Science, Data and Artificial Intelligence by researchers with special expertise in the fields of artificial intelligence, robotics, signal processing, and physiology among others. One of the domains of application is health and the goal is to improve the quality of life of vulnerable populations.

Universidade NOVA de Lisboa - School of Sciences and Technology (NOVA SST)

https://www.fct.unl.pt/en

Universidade NOVA de Lisboa - School of Sciences and Technology (NOVA SST) is engaged in extensive research activity developed in 15 research centres involving 1600 PhD and Master's students of the total enrolment of 8000. Regarding research outputs FCT NOVA has published about 13 000 papers indexed in Scopus and Web of Science (from 2016 to 2020, FCT NOVA published 4 709 papers), in top journals and conferences with high impact, where has earned recognition by its peers. With a total of 630 academic staff and 200 non-academic staff, FCT NOVA's has internationally recognised professionals due to their high potential in R&D+I activities, with researchers awarded ERC grants (11 in total) and merit prizes. FCT NOVA has been awarded since 2014 with ~240 European and International projects. This shows the visibility and competitiveness of the school at International level and its strong experience in collaborative projects, working with partners from all over the world. FCT NOVA has a broad expertise in cutting edge R&D+I due to a multidisciplinary nature and strong experience in fundamental and applied research projects in the digital area.

Medical University of Vienna (MUVI)

https://www.meduniwien.ac.at/web/internationales/muvi/

The Medical University of Vienna (MUVI) is one of the oldest medical education and research facilities in Europe. With 8,000 students, it is currently also the largest medical training center in the German-speaking countries. The MUVI consists of 30 clinical departments, two clinical institutes, 13 medical theory centres, and numerous highly specialized laboratories. Apart from its role as a top-level research and teaching institution, the MUVI provides all medical staff of the Vienna General Hospital, Europe's largest hospital. The Vienna General Hospital treats about 100,000 inpatients and 600,000 outpatients each year.

University of Ioannina (UOI)

https://www.uoi.gr

The University of Ioannina (UOI) was established in 1964 in Ioannina, Epirus which was as a natural continuance of the region's tradition in Letters and Arts. It is a leading public University that has gained national and international recognition, in research and education. Today the University has 23 departments with over 620 faculty members, 30,400 undergraduate students and more than 3,000 graduate students (MSc and PhD). The MSc program is jointly operated by the Department of Materials Science and Engineering, the School of Medicine and the Biomedical Research Institute – FORTH.

The **Department of Materials Science and Engineering** was established in 1999 and belongs to the School of Engineering by providing 5 years of high-level education and training in Materials Science and Technology. The Unit of Medical Technology and Intelligent Information Systems (MedLab) which belongs to the Department of Materials Science and Engineering is a highly innovative and self-contained research unit strongly activated in the fields of Biomedical Engineering and development of Intelligent Information systems. It has an internationally acknowledged excellence in conducting high quality scientific research and developing innovative Information Technology (IT) applications, products, and services.

The **Faculty of Medicine of the School of Health Sciences of the University of Ioannina** was established in 1977 and recently has been highly recognized since has been ranked 1st among all Medical Faculties in Greek Tertiary Education, according to the University of Leiden Ranking (the Netherlands) for 2019, as well as for the 2018 and the 2017.

The **Foundation for Research and Technology - Hellas (FORTH)** was founded in 1983 and is one of the largest research centers in Greece with well-organized facilities, highly qualified personnel, and a reputation as a top-level research institution worldwide. FORTH comprises ten Research Institutes. Its headquarters and central administration are based in Heraklion, Crete. In Ioannina Biomedical Research Institute (BRI) of the Foundation for Research and Technology (FORTH) was established at Ioannina in 1998 as an independent institute. In 2001, BRI joined the Foundation for Research and Technology (FORTH), becoming its seventh Institute. Research in BRI focuses in basic molecular and cellular biology areas of biomedical research with high interest in public health and biomedicine.

The MSc program in Digital Health

The six two-year, interinstitutional, part or full-time MSc (depending on the institution) in Digital Health programs, aim to impart the multidisciplinary knowledge and abilities required to spur innovation in the rapidly expanding field of digital health. Each of the six collaborating Universities has created an MSc program on digital health, falling under the umbrella of the EU's Digital Europe project **Digital Skills for Healthcare Transformation (DS4Health)**. Six in total MSc programs are offered by six internationally recognized Universities.

A brief description of the MSc Programs is given below:

University Hospital and Medical Faculty at the RWTH Aachen (UKA)

https://master-applied-health-informatics.com

The part-time degree program Applied Health Informatics and Digital Medicine aims to train experts in the field of medical informatics. Learn to acquire and evaluate medical data and make it usable for healthcare. Shape the digitalized processes in healthcare and open up a wide range of career opportunities in an interdisciplinary work environment.

The course is offered in cooperation with the University Hospital RWTH Aachen as a university maximum care provider and center for cutting-edge medicine and the Medical Faculty of RWTH Aachen. The scientific direction is under Univ.-Prof. Dr. med. Rainer Röhrig, Institute for Medical Informatics at RWTH Aachen University Hospital. The curriculum was developed with the close involvement of the institute, guaranteeing you excellent teaching.

The scientific Director is Prof. Dr. Rainer Röhrig (email: rroehrig@ukaachen.de)

Tel Aviv University (TAU)

Tel Aviv University's two-year Master's in Digital Health program is designed for future healthcare leaders. It equips students with essential knowledge and skills for evaluating and implementing emerging technologies for healthcare.

The program offers two specialization tracks: "Digital Transformation in Healthcare" and "Data Expert in Health," covering cutting-edge technologies like AI, data science, remote patient monitoring, telehealth, and IoT. Students benefit from experiential learning through internships, collaborations with digital health companies, and participation in tours and conferences. Students will get to know the ecosystem of health leading industries that develop and using groundbreaking technologies, reshaping accessibility to medicine. The program's international scope provides a unique opportunity for students to gain knowledge and practical experience, positioning them as leaders in the dynamic field of digital health with insights from global industry leaders.

The scientific Director is **Prof. Tal Soffer (talsofer@tauex.tau.ac.il)**

Universidade NOVA de Lisboa - School of Sciences and Technology (NOVA SST)

The MSc program provided by FCT, provides advanced technological training, with an interdisciplinary character that allows the student to be equipped with skills in digital technologies applied to health. The study cycle aims to complement the training of students/professionals, deepening the vision on the design, use and development of digital technologies to leverage modern, ethically responsible, efficient, and citizen-centered medical care.

It is intended that students acquire solid, scientific, and technical knowledge in statistical methods applied to health, methodologies for discovering knowledge in large volumes of data, cybersecurity, as well as image processing techniques and integration of digital devices to support diagnosis. In addition, it is intended that students will develop a set of soft skills in terms of interpersonal skills, entrepreneurship and ethics in the use of digital tools.

The scientific Director is **Prof. Ricardo Goncalves (email: rg@uninova.pt)**

The Institut Polytechnique de Paris (IPP)

https://www.ip-paris.fr/en/education/masters/computer-science-program/master-year-1-digital-skills-health-transformation-ds4health

The MSc program created in IPP addresses the key applications Artificial Intelligence, Cybersecurity, Data, Robotics, and Internet of Things. DS4Health will improve higher education for healthcare professionals in digital skills and deepen insight in design, use, and development of digital technologies to form a modern, ethically responsible, efficient and citizen-centred healthcare.

The programme considers specifically soft skills, entrepreneurship and a citizen centred, application-driven co-design approach supporting to aim the digital agenda, and societal challenges. The MSc Program seeks to leverage competences to advance science and technology by researching the implications of the advancement of digital health technology for patient engagement and care delivery and will so serve as an incubator for evaluating and promoting digital health ideas and solutions for providers and patients in Europe.

The scientific Director is **Prof. Adriana Tapus (email: adriana.tapus@ensta-paris.fr)**

Medical University of Vienna (MUVI)

http://meduniwien.ac.at/ds4health

The objective of the Master's program in "Digital Medicine" is to educate healthcare professionals and experts holding degrees in human medicine, dentistry, psychology, nursing science, (computer) science, nutritional sciences, pharmacy, biology, psychotherapy, health sciences/health studies, cultural and social anthropology, or an equivalent foreign university degree. The program is also open to members of the higher service for healthcare and nursing, as well as the medical-technical services.

Students enrolled in "Digital Medicine" will acquire comprehensive knowledge in various domains, such as digital Computing, artificial Intelligence, cybersecurity, robotics, or internet of things in the healthcare sector.The master's program aims to enhance the digital skills of healthcare professionals and deepen their understanding of the design, utilization, and development of digital technologies. The program spans four semesters, during which students can opt for one of two specialized tracks: a) Data experts in Health and b) Technologies for digital health.

Upon completion, students will be awarded a Master of Science degree, empowering them to drive digitalization within the field of healthcare.

The MSc Director is **Prof. Oliver Kimberger (email: oliver.kimberger@meduniwien.ac.at)**

University of Ioannina (UoI)

https://ds4health.uoi.gr

The 2-year, full-time MSc program in **Digital Health** is provided by the **University of Ioannina** through the Department of Materials Science and Engineering in conjunction with the Medical School and the Biomedical Research Institute - Foundation for Research and Technology – Hellas (FORTH). The MSc program aims to impart the multidisciplinary knowledge and abilities required to spur innovation in the rapidly expanding field of digital health and is designed for professionals in their early or later career stages, as well as students who just graduated.

It accepts students from various fields such as Medical Sciences (B.Med.Sc.), Pharmacology, Exact sciences, Polytechnic schools and Schools of Economics. The MSc program includes two tracks of specialization: a) Data experts in Health and b) Digital Health Transformation. Emphasis is given in the promotion of theoretical and practical training and enhancement of skills in data engineering in healthcare, software engineering skills in healthcare and data modelling. The provided skills collectively prepare students for dynamic roles in healthcare technology, data management, system design, and policy development, aligning with the current and future needs of the digital health industry.

The MSc program director is **Prof. Dimitrios I. Fotiadis (email: fotiadis@uoi.gr)**

a. Aims of the MSc programs

- Acquire and deepen important competencies for your professional development and open up new career opportunities in Digital Health.
- To give a broad overview and a **deeper understanding** of digital health domain, including the different types of solutions available, how they can be used, the obstacles to their successful implementation, and **how patients** will be **impacted** as digital health advances.
- **Deliver Higher Education Institutions (HEI) excellence** in specialised **education** and **training** for digital specialists offering a **master's in digital health** aiming to increase the capacity of the training offer for advanced technologies for future healthcare professionals with respect to digital skills.
-
- Bring the **training of digital healthcare professionals** to a **higher level**.
- **Increase** the possibility for students to **be trained** in advanced technologies.
- Provide students with essential support and resources to **gain theoretical knowledge with digital skills** to develop and incubate digital technologies for health.
- To equip students with an understanding of the application of artificial intelligence, wider informatics applications, and their application in healthcare.
- To provide students with the skills to critically evaluate the evidence of the effectiveness of new technologies in healthcare.
- To understand the role of digital health in reducing health inequalities and improving access to populations with access issues.
- To comprehend the regulations, governance, and public acceptability of new technologies in healthcare.
- To understand how digital technology is being used and could be developed further to support remote and rural medicine.

- Create a **world leading, multiple location** training programme to specialize in digital technologies for healthcare.
- Understand the architecture and management of complex information systems for **high-quality information processing**.
- Deal with the current **ethical, legal and social aspects** of digital health.
- Have **in-depth medical and information technology expertise** for medical decision support in diagnostics, treatment and therapeutics.
- Make **valuable contacts** within a strong network of partners.

b. Structure of the MSc programs

The overall trajectory of the MSc programs, common as a general principle for all six partners is briefly described in Figure 1.

1st Semester	2nd Semester	3rd Semester	4th Semester
Compulsory courses	Track 1 **Data experts in Health**	Track 1 **Data experts in Health + Internship/Project**	**MSc Dissertation**
	Track 2 **Digital Health Transformation**	Track 2 **Digital Health Transformation + Internship/Project**	
	Track 3 **Technologies for digital health (interoperability)**	Track 3 **Technologies for digital health (interoperability) + Internship/Project**	

Figure 1: *MSc trajectory throughout the 2 years of the MSc programs duration*

Figure 2 depicts the tracks that are offered by each University partner for its own MSc program.

Tracks	UKA	TAU	IP Paris	FCT	MUVI	UOI
Track 1	✅	✅	✅	✅	✅	✅
Track 2	✅	✅			✅	✅
Track 3	✅		✅	✅		

Figure 2: *Tracks offered by each University partner in their MSc program.*

The general structure of each MSc program is similar for all University partners. However, each MSc program is presented next, along with a description of the curriculum per semester and the ECTS units accredited for each course or activity.

University Hospital and Medical Faculty at the RWTH Aachen (UKA)

The duration of the program is **four semesters**. A blended learning approach, combining digital teaching with short face-to-face sessions, allows you to get the maximum amount of academic and practical training while limiting your time away from home and work.

Figure 3 below depicts the curriculum of the MSc program with the distribution of the ECTS units, along with the distribution per semester.

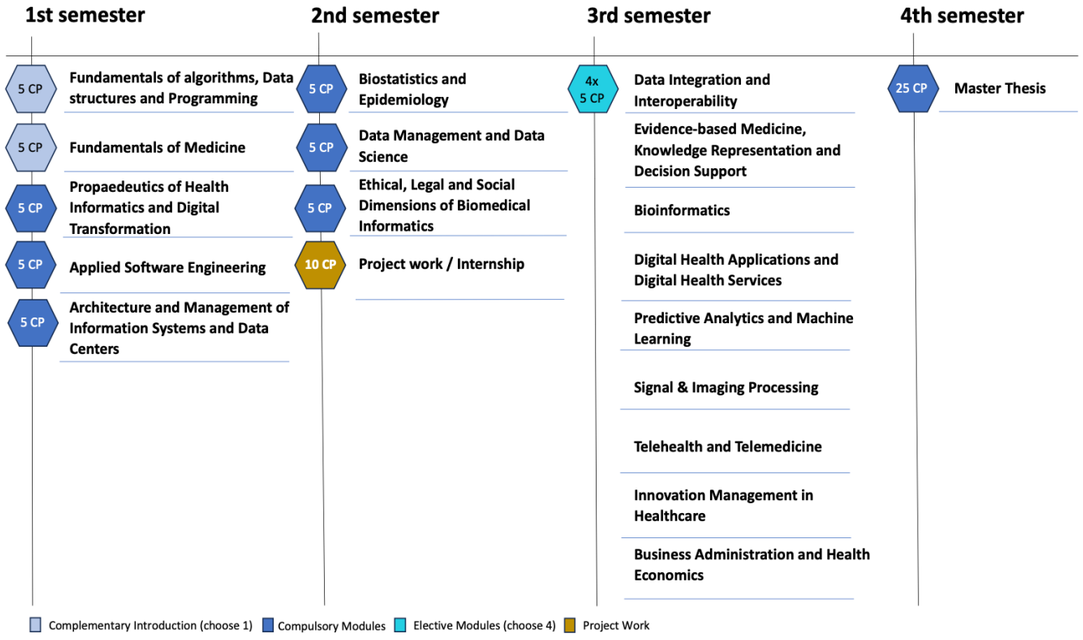


Figure 3: UKA MSc program curriculum and ECTS units distribution throughout the two year duration of the program.

The master's program consists of **12 modules.** Each module includes live online seminars as well as hands-on training and lectures in Aachen. The attendance days are organized in blocks that take place 2-3 times per semester. Each module is supported by **digital teaching and learning content**, which can be accessed flexibly in order to optimally integrate the master's program into everyday working life. The last semester is dedicated to the preparation and writing of the Master's thesis.

Specialise in your area of interest: In the third semester, you can choose your four favourites from nine different elective modules and thus focus on your individual areas of interest.

Tel Aviv University (TAU)

The program is structured over four semesters, totaling **60 ECTS credits**. It adopts a blended learning approach, combining digital teaching and face-to-face sessions for flexibility in learning, maximizing academic and practical training while minimizing time away from home and work. In the first year (first and second semesters), students complete mandatory medical faculty courses (10 ECTS), program-dedicated courses for all students (26 ECTS), and an ethics course via GCP's online platform (non-credit).

In the second year (third and fourth semesters), students focus on specialization in their chosen track (12 ECTS), an elective course (4 ECTS), and a seminar (8 ECTS). The last semester will be dedicated to internship. The program concludes with a thesis submission. Non-medical background students will need to complete additional courses, such as Introduction to Physiology and Pathology of Diseases (non-credit).

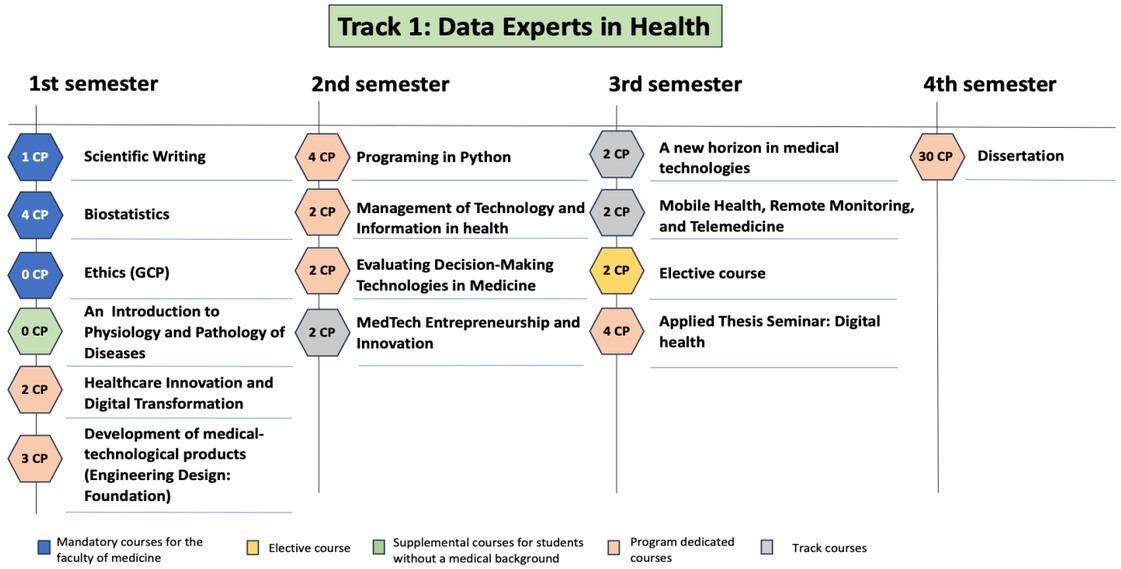


*Figure 4: Curriculum for a student following **Track 1** in TAU.*

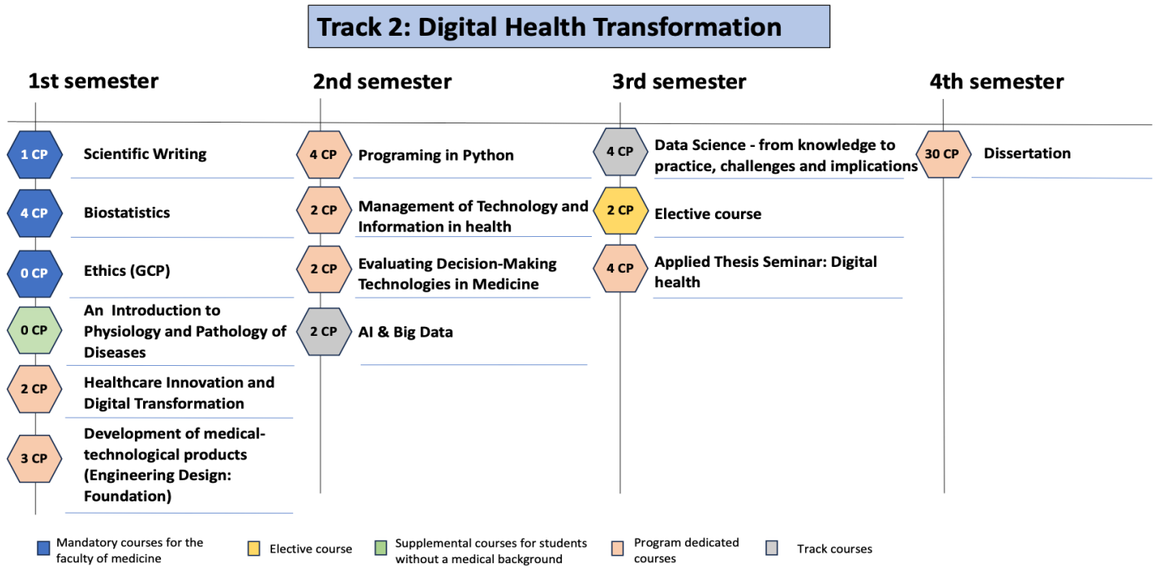


*Figure 5: Curriculum for a student following **Track 2** in TAU.*

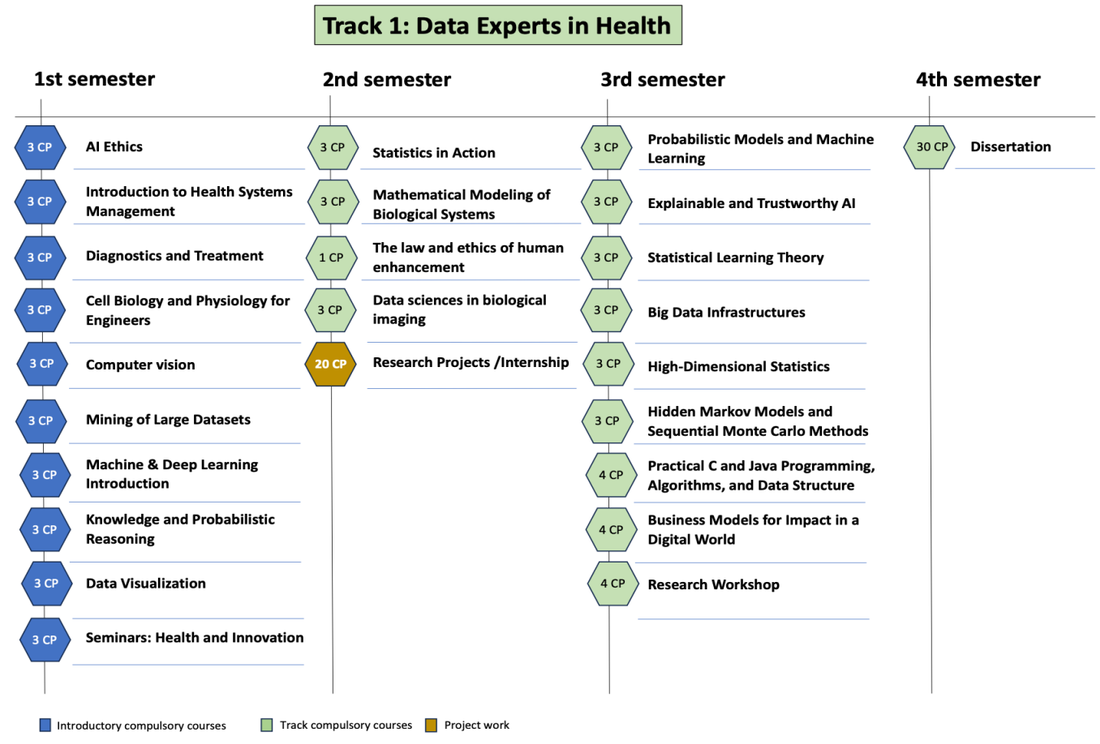


*Figure 6: Curriculum for a student following **Track 1** in IPP.*

INSTITUT POLYTECHNIQUE DE PARIS

Institut Polytechnique de Paris (IPP)

IPP offers a **two-year** MSc program which can be attended either at **level M1** (begin during the first semester and attend during the entire MSc program duration which is four semesters) or at **level M2** (begin during the third semester and attend only the last two semesters).

Regarding the ECTS units accredited during the two years of the MSc program, 30 ECTS are accredited per semester, resulting to a total of **120 ECTS for the entire program** and a total of **60 ECTS for a student who attends only the M2 level** of the MSc program, respectively.

The courses per semester and per track along with the respective accredited ECTS are given in the tables below.

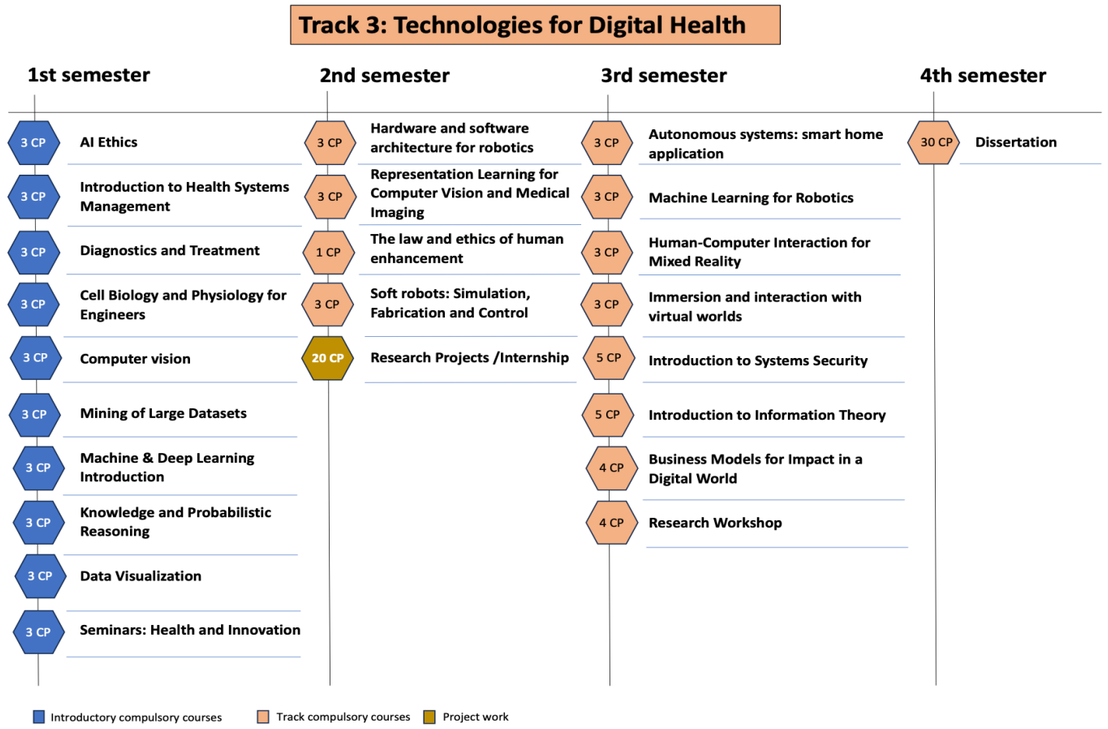


*Figure 7: Curriculum for a student following **Track 3** in IPP.*

NOVA SCHOOL OF SCIENCE & TECHNOLOGY

Universidade NOVA de Lisboa - School of Sciences and Technology (NOVA SST)

The Master's Degree in Digital Skills for Health (MCDigitS) will be lectured at the NOVA School of Science and Technology NOVA FCT and at NOVA Medical School (NOVA MS). MCDigitS aims to encompass the existing training offer, with the skills that exist in the scientific areas of NOVA FCT and NOVA MS, namely in the areas of electrical and computer engineering, medicine, IT, biomedicalsciences, mathematics, applied social sciences and industrial management.

These skills are complemented by scientific areas from other NOVA University Lisbon organic units. From the point of view of the curricular structure, the existence of two branches of specialization is considered, i.e., (i) Data Experts in Health and (ii) Technologies for Digital Health. As previously agreed at the level of the international project that supports the creation of the Master's Degree, both branches consider Semester 1 with only mandatory curricular units (CUs) and Semester 4 dedicated to the Dissertation.

Semester 1, however, comprises 8 CUs of which 6 are to be taken, depending on the candidates' background. Semesters 2 and 3 have mandatory and optional CUs. Semester 2 considers 2 mandatory CUs and 3 optional CUs, while Semester 3 considers only 1 mandatory CU and 4 optional CUs. To ensure coherence between the two branches, three optional UCs are common to both branches (indicated in blue).

Furthermore, some mandatory CUs may be common to both branches (indicated in orange). The general structure of NOVA FCT courses must also be taken into account. A CU of 3 ECTS relating to the topic of entrepreneurship is mandatory in the first year of the master's degree and a CU of 6 ECTS must be chosen from a set of CUs from a different scientific area (Elective Curricular Unit), which is chosen in the second semester.

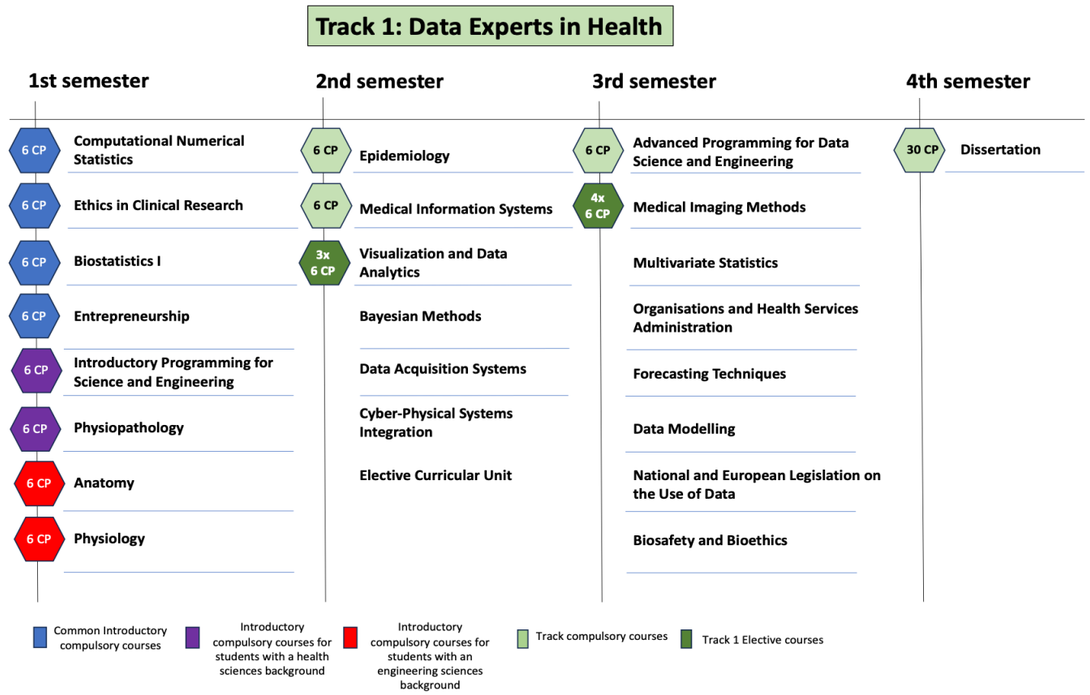


*Figure 8: Curriculum for a student following **Track 1** in FCT.*

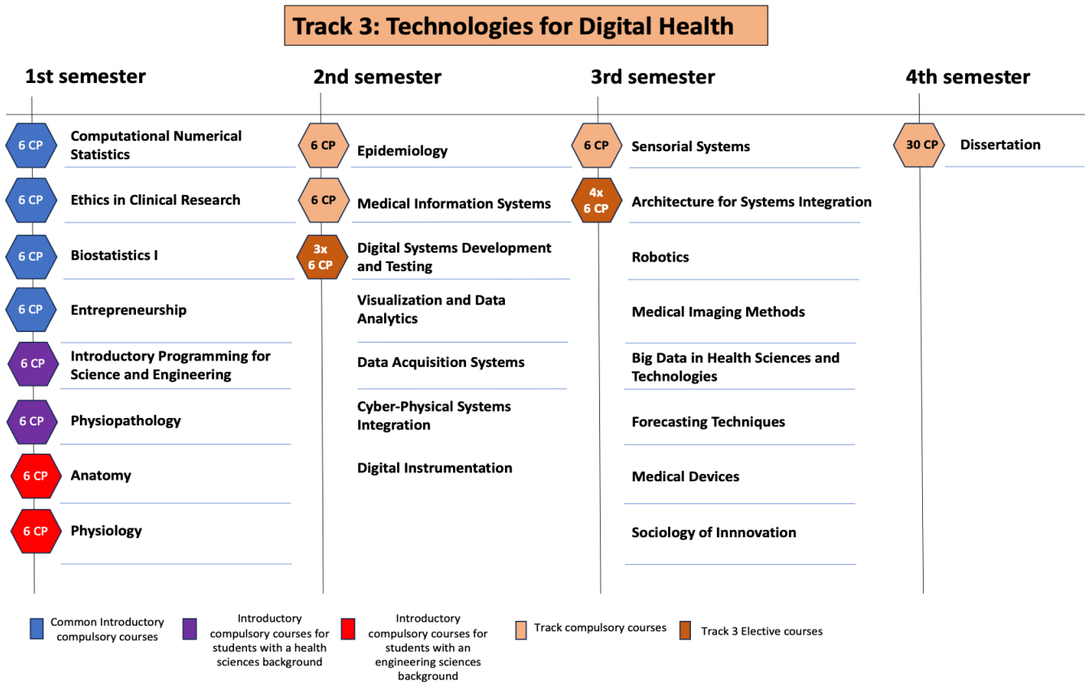


*Figure 9: Curriculum for a student following **Track 3** in FCT.*

Medical University of Vienna (MUVI)

The MSc in Digital Medicine offered by the Medical University of Vienna (MUVI) is a **two-year program (four semesters)** and awards **30 ECTS per semester**, concluding to **120 ECTS** for the entire MSc program. The structure of the program along with the curriculum and the ECTS units accredited to each course or activity are presented in detail in the following tables. Briefly, the student begins the program at the first semester where five compulsory courses must be followed and then, during semesters 2 and 3, a selection between the two offered tracks **(Track 1 and Track 3)** must be made. The second semester consists of five compulsory courses, whereas the third semester consists of three compulsory courses and the internship. Finally, the fourth semester is dedicated to the preparation and presentation of the master thesis, along with the finalization of the internship.

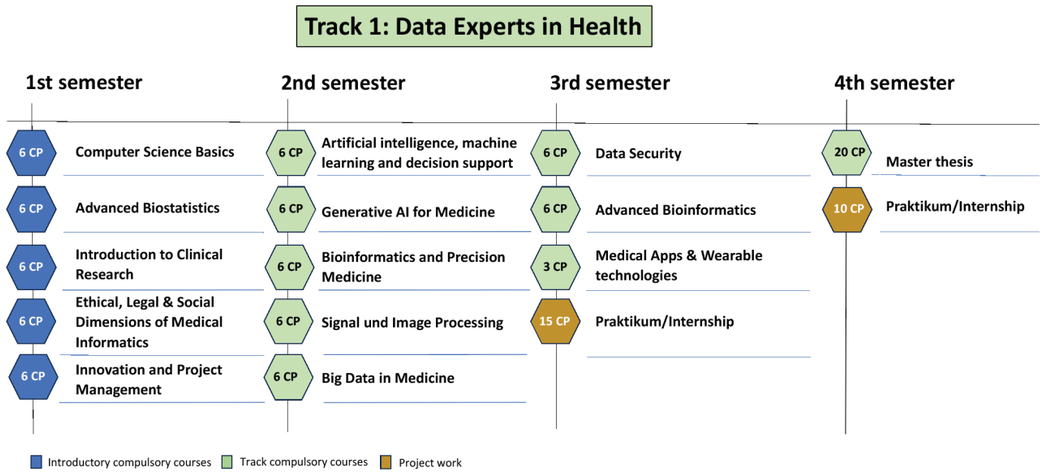


Figure 10: *Curriculum for a student following* ***Track 1*** *in MUVI.*

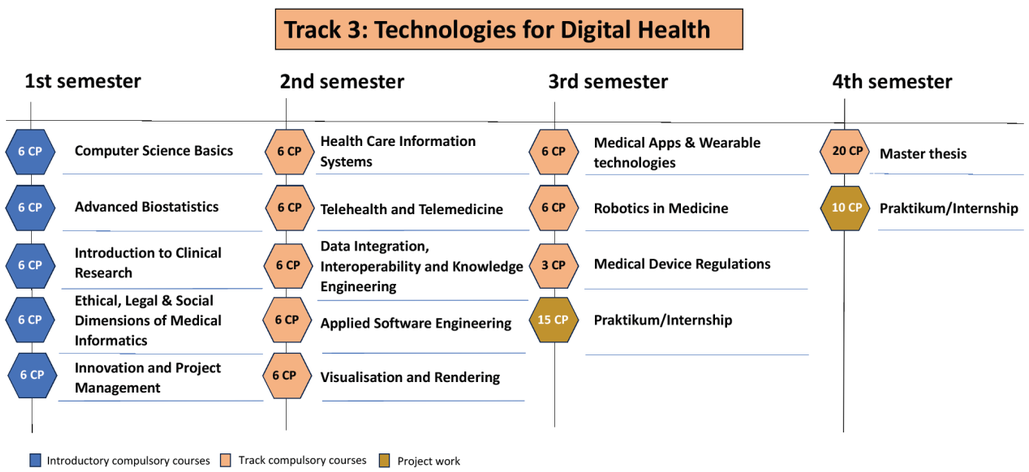


Figure 11: *Curriculum for a student following* ***Track 3*** *in MUVI.*

University of Ioannina (UOI)

The MSc in Digital Health offered by the University of Ioannina is a **two-year full time MSc program** (four semesters), offering a total of **90 ECTS**. Figure 12 and Figure 13 depict the curricula provided by UOI for students that want to follow Tracks 1 and 2, respectively. Briefly, the first semester comprises of four compulsory courses (20 ECTS), followed by a set of four elective pre-track courses (20 ECTS) in the second semester. In the third semester, the student has to select between Track 1 and Track 2 and select two courses (10 ECTS), plus the compulsory mini-project (10 ECTS). Finally, the last semester is dedicated to the preparation and presentation of the dissertation (30 ECTS).

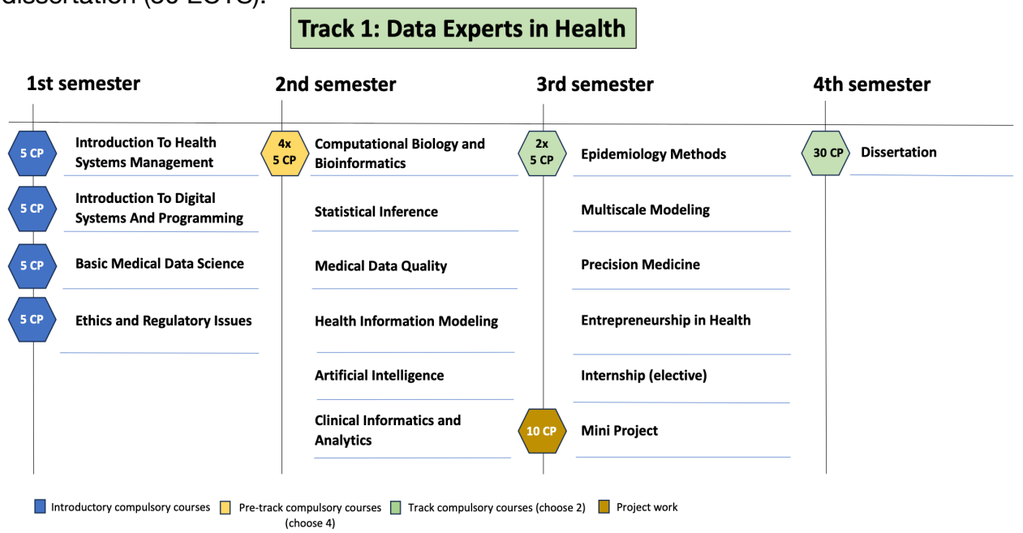


Figure 12: *Curriculum for a student following* ***Track 1*** *in UOI.*

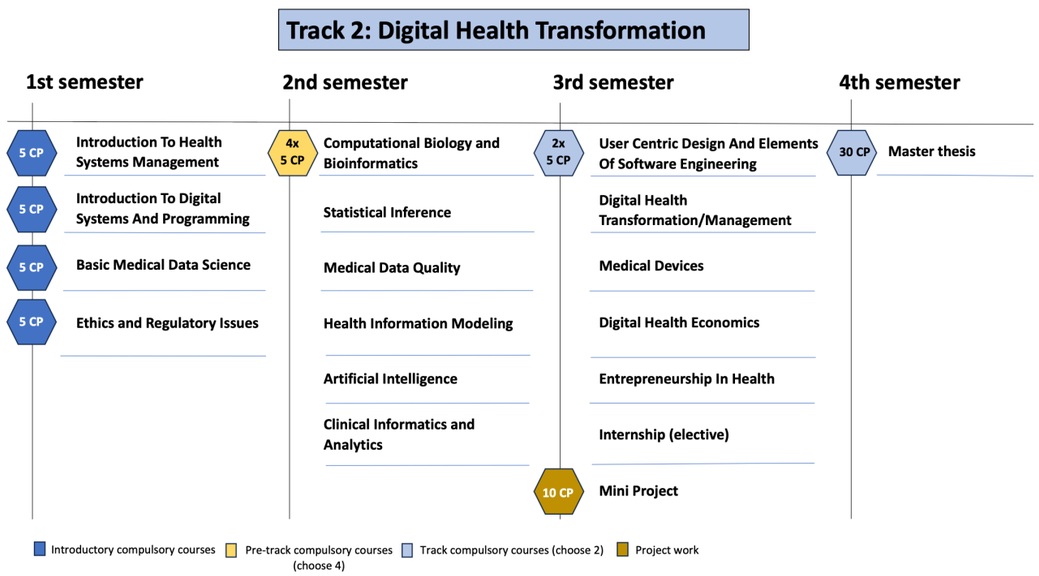


Figure 13: *Curriculum for a student following* ***Track 2*** *in UOI.*

Scientific and Pedagogical Advisory Board

c. DS4Health Scientific and Pedagogical Advisory Board

Pagona Lagiou, MD, MSc, PhD

https://www.hsph.harvard.edu/pagona-lagiou/

Professor and Chair, Dept. of Hygiene, Epidemiology and Medical Statistics, School of Medicine, National and Kapodistrian University of Athens, Greece, Adjunct Professor of Epidemiology, Harvard T. H. Chan School of Public Health, USA

Dr. Lagiou is an MD, board-certified in Internal Medicine, with graduate studies in Epidemiology. She is Chair of the Department of Hygiene, Epidemiology and Medical Statistics at the School of Medicine, National and Kapodistrian University of Athens. She serves as Professor of Hygiene and Epidemiology at the same Department and as Adjunct Professor of Epidemiology at the Harvard T.H. Chan School of Public Health. Dr. Lagiou has served as Foreign Adjunct Associate Professor of Epidemiology at the Karolinska Institutet, Sweden and as Fellow of the Bureau of Epidemiologic Research in the Academy of Athens, Greece.

Her undergraduate and graduate teaching covers the fields of epidemiology-research methodology and preventive medicine-public health. Her research work focuses on the epidemiology and prevention of chronic diseases, in the context of national and international epidemiologic studies and consortia.

Dr. Lagiou has served as a Panel Member at the European Food Safety Authority (EFSA) for nine years. She has also served as Panel Member and Chair of the Consolidator Grants Panel at the European Research Council (ERC). She has participated/participates in several national and international committees on public health-related issues and she is Head of the WHO Collaborating Center for Nutrition and Health in Athens, Greece.

c. DS4Health Scientific and Pedagogical Advisory Board

Prof. May Dongmei Wang, PhD

https://research.gatech.edu/may-dongmei-wang

Professor of BME, ECE, and CSE The Wallace H. Coulter Distinguished Faculty Fellow, Director of Biomedical Big Data Initiative and Georgia Distinguished Cancer Scholar, Petit Institute Faculty Fellow, Kavli Fellow, AIMBE Fellow, IAMBE Fellow, IEEE Fellow Board of Directors of American Board of AI in Medicine, Georgia Institute of Technology and Emory University.

Dr. Wang chairs IEEE Engineering in Medicine and Biology Society (EMBS) BHI-Technical Community and ACM Special Interest Group in Bioinformatics (SIGBio), and is the Senior Editor of IEEE Journal of Biomedical & Health Informatics (IF=7.02), and Associate Editor for IEEE Transactions on BME, and IEEE Review of BME. She was IEEE EMBS Distinguished Lecturer and PNAS (Proceeding of National Academy of Sciences) Emerging Area Editor. During the past decade, Dr. Wang has been a standing panelist for NIH Study Sections, NSF Smart and Connect Health, and Brain Canada, and has co-chained and helped organize more than 10 conferences by IEEE Engineering in Medicine and Biologics Gordon Research Conferences, ACM Special Interest Groups in Bioinformatics, and IEEE Future Directions.

Dr. Wang received GIT Outstanding Faculty Mentor for Undergrad Research Award and Emory University MilliPub Award for a high-impact paper cited over 1,000 times. She was selected into 2022 Georgia Tech LeadingWomen Program and 2021 Georgia Tech Provost Emerging Leaders Program. Previously, she was Carol Ann and David Flanagan Distinguished Faculty Fellow, GIT Biomedical Informatics Program Co-Director in ACTSI, and Bioinformatics and Biocomputing Core Director in NIH/NCI-Sponsored U54 Center for Cancer Nanotechnology Excellence.

I. The MSc program in Digital Health

c. DS4Health Scientific and Pedagogical Advisory Board

Prof. Metin Akay, PhD

https://www.bioe.uh.edu/faculty/akay

Founding Chair John S Dunn Endowed Chair Professor Cullen College of Engineering, University of Houston.

Prof. Metin Akay is currently the founding chair of the new Biomedical Engineering Department and the John S. Dunn professor of biomedical engineering at the University of Houston. He received his B.S. and M.S. in Electrical Engineering from the Bogazici University, Istanbul, Turkey in 1981 and 1984, respectively and a Ph.D. degree from Rutgers University in 1990.

Dr. Akay has played a key role in promoting biomedical education in the world by writing and editing several books, editing several special issues of prestigious journals, including the Proc of IEEE, and giving more than hundred keynote, plenary and invited talks at international conferences, symposiums and workshops regarding emerging technologies in biomedical engineering.

c. DS4Health Scientific and Pedagogical Advisory Board

Univ.-Prof. Dr.sc.hum. Elske Ammenwerth, Dipl.-Inform. Med., MET

Professor for Medical Informatics, Institute of Medical Informatics

https://www.elske-ammenwerth.de/

Prof. Dr. Elske Ammenwerth studied Medical Informatics at the University of Heidelberg and Education Technology at the University of British Columbia. Since 2005, she is full professor for medical informatics at UMIT TIROL – Private University for Health Sciences and Health Technology.

Elske Ammenwerth is an internationally recognized researcher in the area of medical informatics education, evaluation research and evidence-based health informatics. She is Austrian representative in the European Federation of Medical Informatics and the International Medical Informatics Association.

She authored several textbooks, including recent books on health information systems (Springer, 2023), nursing informatics (Kohlhammer, 2022) and on evidence-based health informatics (IOS Press, 2016). She has co-authored the IMIA recommendations on health informatics education (publication 2010, revision 2023).

For her contribution to evidence-based health informatics, she received the David Sackett Prize of the German Network for Evidence-based Medicine. She is International Fellow of the American College of Medical Informatics (ACMI) and member of the International Academy of Health Science Informatics (IAHSI).

Program Directors

UNIKLINIK RWTH AACHEN

Prof. Dr. Rainer Röhrig

Email: rroehrig@ukaachen.de

Prof. Rainer Röhrig has been head of the Institute of Medical Informatics at RWTH Aachen University Hospital since May 1, 2019. Previously, he was responsible for the Department of Medical Informatics at Carl von Ossietzky University Oldenburg for five years.

Rainer Röhrig first studied computer science and then switched to human medicine. After completing his studies, he worked as a physician and medical informatics specialist.

TEL AVIV UNIVERSITY אוניברסיטת תל אביב

Prof. Tal Soffer

Director of Technology and Foresight Unit and the Web supported Instruction Center

Email: talsofer@tauex.tau.ac.il

Director of two academic units: Technology and Society Foresight (TSF) and the Center for Web-Supported Academic Instruction - Virtual TAU. She has a Ph.D. in Education and an M.A. in Labor relation from the Tel-Aviv University.

She has an extensive research experience of more than 20 years, in the field of Technology Foresight and its relations with societal implications: education and cyber technologies specialization in e-learning, community learning and Life Long Learning; privacy and cyber technologies; future of work and leisure and it's relation to occupations and skills.

She has been involved in vast of Israeli and EU research projects as principal investigator such as: Future Opportunities of Middle Triole Pupils, OPET, e-Living, NBIC, SSH-FUTUERS and FESTOS projects; and as coordinator of the ELOST project – e-Government for Low Socio-economic Status Groups and the PRACTIS project: Privacy - Appraising Challenges to Technologies and Ethics.

In addition she has consulting experience to policymakers in the Israeli Ministries such as: Ministry of Education, Ministry of Science and technology, Ministry for the development of the Negev and the Galilee and other clients, such as the EU. She is a member in several comities such as: the academic advisory council of World ORT Kadima Mada, FEMIS - Euro-Mediterranean network.

She has an extensive amount of publications in Journals and EU reports as well as presentations of papers in conferences papers on various subjects.

I. The MSc program in Digital Health
d. Program Directors

INSTITUT POLYTECHNIQUE DE PARIS

Prof. Adriana Tapus

Director of the Doctoral School of IP Paris

Email: adriana.tapus@ensta-paris.fr

Adriana TAPUS is Full Professor in the Autonomous Systems and Robotics Lab in the Computer Science and System Engineering Department (U2IS), at ENSTA Paris, Institut Polytechnique de Paris, France. S

ince 2019, she is the Director of the Doctoral School of the Institut Polytechnique de Paris (IP Paris). Prof. Tapus serves as one of the member of the Women in Science and Engineering Committee at IP Paris. In 2011, she obtained the French Habilitation (HDR) for her thesis entitled "Towards Personalized Human-Robot Interaction". She received her PhD in Computer Science from Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland in 2005.

She worked as an Associate Researcher at the University of Southern California (USC), where she was among the pioneers on the development of socially assistive robotics, also participating to activity in machine learning, human sensing, and human-robot interaction. Her main interests are on long-term learning (i.e. in particular in interaction with humans), human modeling, and on-line robot behavior adaptation to external environmental factors. She worked on various applications going from socially assistive applications for helping people with physical and cognitive impairments (e.g., children with autism, the elderly, people suffering of sleep disorders, people in rehabilitation after a stroke) to autonomous vehicles.

Prof. Tapus is a Senior Editor of International Journal on Robotics Research (IJRR), an Associate Editor for International Journal of Social Robotics (IJSR), an Associate Editor for ACM Transactions on Human-Robot Interaction (THRI), and Associate Editor for Frontiers in Robotics and AI. She is member of the program and steering committee of several major robotics conferences (e.g., General Chair 2019 of HRI, Program Chair 2018 of HRI, General Chair 2017 of ECMR). Prof. Tapus was the Keynote Speaker at several workshops and conferences. She has more than 200 research publications.

NOVA SCHOOL OF SCIENCE & TECHNOLOGY

Ricardo Jardim-Gonçalves
Full professor at NOVA
University of Lisbon
Email: rg@uninova.pt

Ricardo Jardim-Goncalves is full professor at Universidade NOVA de Lisboa (FCT NOVA). Head for Internacional Relation at FCT NOVA. He is also research Coordinator at UNINOVA – Instituto de Desenvolvimento de Novas Tecnologia.

His research activities have been focused on Interoperability of Complex Systems. He has been researching in European Commission funded projects during the last 30 years, with more than 300 papers published in conferences, journals and books. Member of the board of UNINOVA, 1st in the ranking of H2020 Research and Development project funds management. Also, he directes GRIS (GRupo para a investigação em Interoperabilidade de Sistemas) at UNINOVA (Instituto para o Desenvolvimento de Novas Tecnologias), CTS (Centro para as Tecnologias e Sistemas). He is Expert for the European Commission and project leader in ISO TC184/SC4.

Ricardo is graduated in Computer Science, with MSc in Operational Research and Systems Engineering, and has a PhD degree and Habilitation in Industrial Information Systems by the NOVA University of Lisbon.

I. The MSc program in Digital Health
d. Program Directors

MEDICAL UNIVERSITY OF VIENNA

Prof. PD Dr. Oliver Kimberger
Email: oliver.kimberger@meduniwien.ac.at

MSc, MBA is currently working as the interim head of the Department of General Anesthesiology and Intensive Care Medicine at the Medical University of Vienna (since 2023) and as Professor for Perioperative Information Management (since 2021).

He completed a postgraduate study of statistics and biometry at the University of Heidelberg in 2012 (thesis: Meta-Analysis of Method Comparison Studies) and a Health Care Management MBA at the Medical University of Vienna in 2020. He has spent two years as a full-time researcher at the University of Bern, Inselspital.

His scientific focus includes microcirculation & fluid management, patient temperature management and patient temperature management technology, big data, artificial intelligence, data science and the digital transformation of medicine.

d. Program Directors

UNIVERSITY of IOANNINA

Prof. Dimitrios I. Fotiadis

FIEEE, FEAMBES, FIAMBE, Prof. of Biomedical Engineering, University of Ioannina / FORTH, Head of the Unit of Medical Technology and Intelligent Information Systems, Editor in Chief IEEE Journal of Biomedical and Health Informatics.

Email: fotiadis@uoi.gr

Prof. Dimitrios I. Fotiadis received the Diploma degree in chemical engineering from the National Technical University of Athens, Athens, Greece, and the Ph.D. degree in chemical engineering and materials science from the University of Minnesota, Minneapolis. He is currently a Professor of Biomedical Engineering in the Department of Materials Science and Engineering, University of Ioannina, Ioannina, Greece, where he is also the Director of the Unit of Medical Technology and Intelligent Information Systems and is also an Affiliated Member of Foundation for Research and Technology Hellas, Institute of Molecular Biology and Biotechnology, Dept. of Biomedical Research. He was a Visiting Researcher at the RWTH, Aachen, Germany, and the Massachusetts Institute of Technology, Boston.

He has coordinated and participated in more than 250 R&D funded projects (in FP6, FP7, H2020, and national Projects), being the coordinator (e.g. INSILC, TAXINOMISIS, HOLOBALANCE, CARDIOCARE, DECODE, etc.) and Technical coordinator (e.g. SMARTOOL, KARDIATOOL, TO_AITION, etc.). He is the author or co-author of several papers in scientific journals and peer-reviewed conference proceedings, and books in the field of Medical Informatics.

His work has been internationally recognized. He is IEEE EMBS Fellow, EAMBES Fellow, Fellow of IAMBE, member of the IEEE Technical Committee of information Technology in Healthcare, Editor in Chief of IEEE Journal of Biomedical and Health Informatics, Member of the Editorial Board in IEEE Reviews in Biomedical Engineering, Associate Editor for IEEE Open Journal in Engineering in Biology and Medicine and Computers in Biology and Medicine. His research interests include multiscale modelling of human tissues and organs, intelligent wearable/implantable devices for automated diagnosis, processing of big medical data, machine learning, sensor informatics, image informatics, and bioinformatics. He is the recipient of many scientific awards including the one by the Academy of Athens. He is the co-founder of PD Neurotechnology Ltd, UK.

Application process

The application process for each candidate comprises of a series of steps common for all six Universities in a general manner. The candidate may begin the entire process by visiting the central DS4Health website, at which a detailed overview of the MSc programs is provided, along with information on the DS4Health alliance of Universities, Contact details and other useful general information on the MSc programs.

After having been thoroughly enlightened regarding the MSc programs, the candidate then selects the University at which he/she wants to follow the MSc program. The candidate is then redirected to the respective dedicated MSc program website of the University of interest where all important information on every aspect that concerns the MSc program is provided. Details on the curriculum, the prerequisites in terms of degree level qualifications, English language level, supporting documents etc. are provided within each website.

The next step for the candidate is to click on the Apply dedicated button where a redirection to the application submission platform is made. There, the candidate must fill all the required personal information (any missing information might lead to the rejection of the application) and upload all the required documents in the specified format (upload of the wrong documents or documents in a not supported format might lead to the rejection of the application).

Finally, the candidate should examine the application checklist and ensure that all boxes are checked before the final submission of everything is done. The process schematic is described in Figure 14. The following sections describe the entrance requirements in detail.

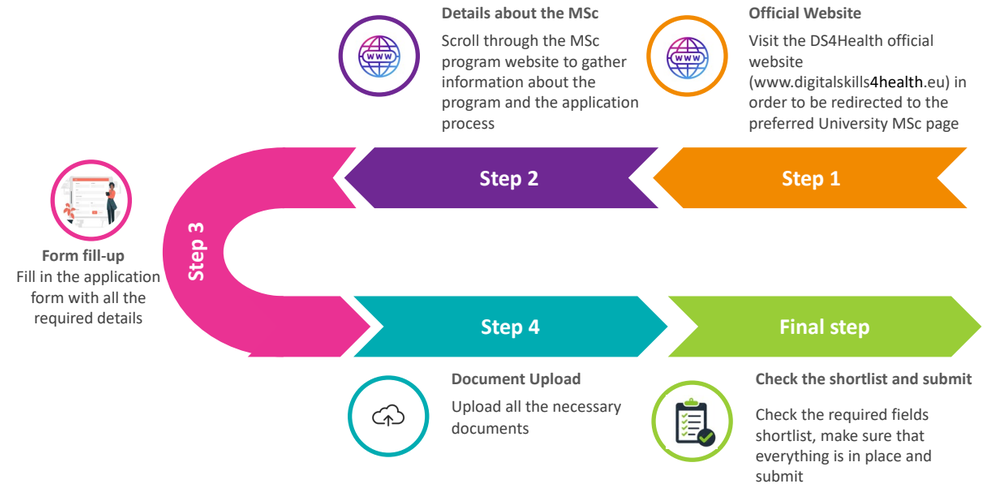


Figure 14: *Application submission process general scheme.*

Entrance requirements

a. Degree-level qualifications

Different degree-level qualifications are required by each of the collaborating university institutions of the alliance and are presented in detail below.

University Hospital and Medical Faculty at the RWTH Aachen (UKA)

The minimum degree-level qualifications for UKA are the following:

First academic degree e.g. Bachelor of Science (B.Sc.) or completed medical studies accompanied with

- At least 30 credit points (CP) from the mathematical-informatic field, or
- At least 30 credit points (CP) from the field of medical fundamentals.

Tel Aviv University (TAU)

- 1. Admission is open to graduates who were awarded a degree with a final minimum grade average of 80 in one of the following areas: Life Sciences, Natural Sciences, Exact Sciences, Medical Sciences (B.Med.Sc.), Pharmacology, Agriculture, Communication Disorders, Nursing, Physical Therapy or Occupational Therapy.

- 2. Students who have not yet completed the undergraduate degree may register on condition, however, they have no more than 3 courses to complete to the degree and have a minimum average grade of 80 at the time of registration.

- 3. Candidates with an M.D., D.M.D. or D.V.M. may register.

- 4. Candidates with a B.A. in one of the areas listed in No. 1 above and whose final grade is less than 80 but higher than 75 may apply to the Admissions Committee.

- 5. Candidates with a B.A. in an area other than those listed in No. 1 may apply to be accepted on a provisional basis. The student will be on special status and will be required to take supplementary studies.

Entrance requirements

Institut Polytechnique de Paris (IPP)

- A bachelor's degree (180 ECTS) is required to apply to the MSc program.

Universidade NOVA de Lisboa - School of Sciences and Technology (NOVA SST)

- a) Holders of a bachelor's degree (licenciado in Portuguese) or legal equivalent, in the same scientific area or in areas to be defined by the Department Council predominant in the execution of the master's course;

- b) Holders of a foreign higher academic degree conferred after a 1st cycle of studies organized in accordance with the principles of the Bologna Process by a State adhering to this Process, in the same scientific area or in areas to be defined by the Council of the predominant department in the execution of the master's course;

- c) Holders of a foreign higher academic degree that is recognized as meeting the objectives of the degree licenciado by the Scientific Council of NSST, in the same scientific area or in areas, to be defined by the Council of the predominant department in the execution of the master's course;

- d) Holders of an academic, scientific or professional curriculum that is recognized by the Council of the predominant department in the execution of the master's course as testifying the ability to carry out this cycle of studies.

Medical University of Vienna (MUVI)

- A bachelor's degree of at least 180 ECTS in the master's scientific area is required for admission.

UNIVERSITY of IOANNINA

University of Ioannina (UOI)

Students must be holders of a bachelor's degree or legal equivalent in the master's scientific area, such as Medical Sciences (B.Med.Sc.), Pharmacology, Exact sciences, Polytechnic schools and Schools of Economics.

b. Other qualifications

Other qualifications such as publications or relative working experience might also be considered in cases of equivalent main qualifications and shortage of MSc positions.

c. English language proficiency

In order for a student to be eligible to be recruited, a **minimum of a B2 level** in English is required. However, some institutes diversify their **recommended** English language proficiency to a higher level. The recommended English language proficiency level for each institution is depicted in the table below.

	UKA	TAU	IPP	FCT	MUVI	UOI
Recommended English language level	C1	B2	C1	B2	B2	B2

d. References

Two referees who can vouch for your academic aptitude and suitability for the course must be listed as references. The types of references that are needed to support your application for this course and how they will be evaluated are described in the **How to Apply** section of the application website of each University.

e. Supporting documents

Your application will need to be accompanied by supporting materials, such as a personal statement/cover letter and a CV/résumé.

II. Application process

Entrance requirements

f. Sample personal statement

Dear Admissions Committee,

I am writing to express my strong interest in the Digital Health MSc program at [University Name]. With a solid foundation in [Your Current Field or Previous Degree], I am eager to transition my skills and knowledge into the dynamic and rapidly evolving field of digital health.

My academic journey has equipped me with a comprehensive understanding of [relevant concepts or technologies in your current field]. However, it was during my [mention any relevant project, internship, or research experience] that I recognized the transformative potential of digital health in enhancing patient care, optimizing healthcare systems, and fostering innovation.

I am particularly drawn to [University Name] because of its esteemed faculty, cutting-edge research initiatives, and commitment to addressing real-world healthcare challenges. The interdisciplinary nature of the Digital Health MSc program aligns perfectly with my aspirations to integrate [mention any relevant skills or experiences] with advanced digital technologies to improve healthcare delivery.

In my [X years] of experience in [Your Current Field], I have witnessed the impact of technology on healthcare, from wearable devices collecting patient data to artificial intelligence aiding in diagnostics. These experiences have fueled my passion for leveraging digital solutions to address the complexities of modern healthcare systems.

One aspect that sets me apart is my commitment to understanding the ethical and societal implications of digital health. I am aware of the delicate balance between innovation and privacy, and I am eager to explore how digital health technologies can be developed and implemented responsibly.

I am particularly excited about the opportunity to engage in [mention any specific courses, projects, or research areas in the program] as they align with my career goals. The chance to collaborate with renowned experts and fellow students who share my enthusiasm for digital health is a prospect I find inspiring.

In conclusion, I am confident that the Digital Health MSc program at [University Name] will provide the perfect platform for me to blend my [Your Current Field] background with cutting-edge digital health technologies. I am excited about the prospect of contributing to the ongoing advancements in healthcare through this program and am eager to bring my unique perspective to the [University Name] community.
Thank you for considering my application. I look forward to the opportunity to further discuss how my experiences and goals align with the objectives of the Digital Health MSc program.

Sincerely

Entrance requirements

g. Interview process

Typically, interviews are conducted as a part of the admissions procedure. Shortlisted candidates will be chosen based on their educational background, relevant job experience, references, personal statement, and any written work they have provided. As soon as practicable after the application deadline has passed, those who have been chosen for an interview will be notified. Senior members of the program team will make up the interview panel, and sessions will typically last 15 minutes. All candidates who have been shortlisted will be interviewed through video link. Interviews will be performed in English.

h. Disclosure of criminal convictions

Before we can accept you as a student in our MSc program, we will require you to declare any pertinent, pending criminal convictions in accordance to each University regulations for both students and employees.

i. Important Dates

FEBRUARY 1

MSc Programs material distribution including MSc program course handbooks for each participating University, MSc program student recruitment handbook and MSc program student handbook.

MAY 31

MSc program application deadline
(for most Universities).

SEPTEMBER 23

Expected start date
(for most participating Universities).

Application Policies

a. Gender Equality Plan

The DS4Health Alliance recognizes the importance of establishing an inclusive environment that cherishes diversity and is dedicated to promoting a culture of gender equality throughout its academic institutions. The Alliance has put in place a comprehensive gender equality plan that includes steps to prohibit discrimination based on gender, promote equal opportunities, and address systemic gender biases. A balanced representation of genders among students will be ensured through targeted recruitment strategies, mentorship programs will be established to support women's career development in academia, and awareness campaigns will be launched to combat stereotypes and biases. Through these coordinated efforts, the Alliance hopes to establish a campus atmosphere where gender equality is not only upheld but also actively fostered, allowing all people—regardless of gender—to flourish and contribute to the goal of the university.

The participating Universities of Universities of the Alliance have made available their Gender and Equality plans through the following URLs.

University Hospital and Medical Faculty at the RWTH Aachen (UKA)

https://www.rwth-aachen.de/cms/root/Die-RWTH/Profil/~eni/Gender-Diversity/?lidx=1

Tel Aviv University (TAU)

https://diversity.tau.ac.il/sites/women.tau.ac.il/files/media_server/all-

Institut Polytechnique de Paris (IPP)

https://www.ip-paris.fr/sites/default/files/GEP/GEP-IP-PARIS-final.pdf

Universidade NOVA de Lisboa - School of Sciences and Technology (NOVA SST)

https://www.unl.pt/sites/default/files/gep_web_v5.pdf

Medical University of Vienna (MUVI)

https://www.meduniwien.ac.at/web/fileadmin/content/ueber_uns/pdf/220123_MedUni_GEP_2021_V09_RZ_ANSICHT_WEB_navi.pdf

University of Ioannina (UOI)

https://eif.ac.uoi.gr/wp-content/uploads/2023/01/eif-pi-schedio-drasis-2022-25.pdf

b. Equal Opportunities

The DS4Health Alliance is fully committed to promote equal opportunities following the European Parliament decisions on Equal Opportunities (Art. 21 of the EU Charter of Fundamental Rights - https://fra.europa.eu/en/eu-charter/article/21-non-discrimination). During the recruitment and selection of the prospective students for the Digital Health MSc Programs the only consideration taken into account is that the prospective student meets the requirements set by each MSc Program. It is prohibited any discrimination for any reason such as sex, race, colour, ethnic or social origin, genetic features, language religion or belief, political or other opinion, membership of a national minority, birth, disability, age or sexual orientation.

The DS4Health Alliance fully supports equality between women and men and equal opportunities, through each MSc Program hosting University regulation of equal opportunities.

The DS4Health Alliance recognizes and respects the right of persons with disabilities to benefit from measures of each MSc Program hosting University designed to ensure their independence, social and occupational integration and participation in the life of the community.

The DS4Health Alliance is strongly committed to fighting racism and xenophobia.

c. Plagiarism in Prospective Students Documents

Plagiarism in student documents is overall prohibited and all submitted documents will undergo a plagiarism check before consideration by each MSc Program.

In case that plagiarism is detected, the application will be flagged. The MSc Program has the right to request from the applicant explanations in written and the applicant must reply within two weeks from the receipt of the letter.

In case that the explanations are considered satisfactory the recruitment committee continues removing the flag from the applicant. If not, then the application will be rejected, and the student will be informed on the decision.

In the second case the student has the right to submit an appeal within two weeks in written, which will be considered by the recruitment committee. If the appeal will be rejected, the decision

III. Application Policies

is final and the recruitment process for this student will be terminated, and the application will remain flagged. In the appeal will be accepted then the recruitment process continues without any plagiarism flag.

In all cases that recruitment continues, the plagiarism flag should be removed to avoid any biased decisions.

d. Data management

Data of students are processed according to University policy and DS4Health Data Management Plan in accordance to the General Data Privacy Regulation (GDPR).

a. Overview

Your application will only be evaluated in light of your demonstrated academic ability and aptitude, as well as any additional prerequisites for admission listed under that area. Admission criteria, rules and templates must be clearly stated well before the application deadline. This is a pure responsibility of each MSc Program and follow the communication processes described above. The recruitment handbook (short and long version) of the DS4Health alliance includes criteria and rules which apply to all MSc Programs.

The criteria, rules and templates are provided by each MSc Program. Those are used for the assessment of the prospective students demonstrating the recruitment / admission process is appropriate, consistent and fair.

b. Interviews

All MSc Programs include an interview of the applicant within the admission process, and it is part of the evaluation. The interview takes place only if the applicant meets or is likely to meet preliminary criteria which mainly refer to eligibility for the MSc Program and completeness of the submitted documents.

Interviews are conducted by two (minimum) MSc Program staff members, trained in the recruitment / admission process, in English, in person or online. Questions to the applicant must be relevant to admission criteria, and to clarifications or further information related to the submitted documents.

The evaluation the interview is made against predetermined criteria set by the MSc Program. Notes of the interview, which capture information on the skills, and experience of the applicant must be uploaded/included in the admission system. Applicants have the right to have access to the interview notes.

c. Decisions

When the application is considered complete, the MSc Program informs the applicant in written on the steps and deadlines to follow. The MSc Programs might use a recruitment / admission IT system to upload all related material and to allow prospective students to follow the progress of their applications.

IV. Application assessment

The applicant's material is available to the members of the recruitment / admission committees of each MSc Program. After the completion of all steps the committee takes a decision on the admissions, taking into account restrictions which might exist within each MSc Program and restrictions which apply to the DS4Health alliance. The Committee respects deadlines announced by the MSc Program. If deadlines cannot be met, the applicants must be notified in written.

The recruitment/admission committee communicates its decision to the MSc Program governing body, which makes the final decision. After the decision was made a formal decision is communicated to the applicant in written. In cases of acceptance of application, the decision letter includes terms and conditions of the acceptance of the application. In case of rejection, the rejection reason(s) are provided, which are related to the admission criteria, previously specified. Additional feedback can be provided, only if the applicant requests it in written, which is considered as an appeal to the decision made, and the recruitment/admission committee will re-examine the application.

The applicant must respond in written within two weeks from receipt of the decision. In case of admission with a fellowship, the origin of the fellowship will be mentioned.

Conditional admission can be provided also, specifying the conditions, following internal rules of each MSc Program. Conditional admission includes additional courses to be taken or terms which must be considered by the applicant in a future application.

Complaints by the applicants can be considered only for the process followed and not to the academic judgement made by the Committee.

The decisions are considered final after two weeks of the date of the final decision sent to the applicants, a period which is considered enough to reply/address all complaints by the applicants. After that period no complaint or appeal against the decisions made is acceptable.

d. Accepting the Offer

The admission letter includes a date by which the applicant has to make a formal reply to the admission offer. The reply by the applicant must include an acceptance or decline of the admission offer. If an IT system is in place, the applicants can use it to reply.

Indicative date for this reply is 1st August of the year of admission.

In case of a MSc Program with tuition fees, the applicant makes a deposit with the acceptance of the admission offer. Tuition fees are clearly stated in the recruitment information provided by each MSc Program. The same applies for deposits. Bank account is provided with the admission offer letter.

With the acceptance letter, students provide a valid copy of the ID card or Passport. Without it enrolment is not confirmed. In case that they need a VISA to enter the country of the MSc program, they can initiate the process, requesting from the MSc Program additional documents needed. The VISA should be submitted a week before the starting of the semester and before their arrival to the country.

Confirmation of the acceptance to the MSc Program is sent to the student only after all above are met. Not timely submission of the requested documents automatically means that the admission offer is not any more valid.

e. Declining the Offer

Prospective students have the right to decline the offer. To be eligible for further applications in the coming years, they must submit their decline letter in maximum two weeks before receiving the admission offer.

The DS4Health Alliance has the right to check for multiple applications and/or admissions in more than one MSc Programs of the alliance. If a student is selected for admission in more than one MSc Programs of the DS4Health alliance, a letter will be sent from the DS4Health coordination team with instructions to decline from one of the MSc Programs. Upon receipt of the decline, the process continues as above.

Beeing a Student

As a student in this dynamic and innovative field, you are embarking on a journey that combines cutting-edge technology with healthcare to address the evolving challenges of the digital age. This section provides essential information and guidance to help you navigate your academic experience and make the most of your time in the program.

Academic Excellence and Rigor

All six MSc in Digital Health programs are designed to challenge and inspire you. Our faculties consist of experts in the field of digital health, and the curricula are carefully crafted to provide a comprehensive understanding of the intersection between technology and healthcare. Be prepared to engage in rigorous academic inquiry, critical thinking, and hands-on projects that will enhance your skills and knowledge in this ever-evolving field.

Collaboration and Networking

Digital health is a multidisciplinary field that thrives on collaboration. Take advantage of the diverse backgrounds and expertise of your fellow students, faculty, and industry professionals that participate in the DS4Health alliance. Participate in group projects, attend workshops, and leverage networking opportunities to build connections that can extend beyond the classroom. The relationships you form during your time in the program can be valuable assets in your future career.

Stay Informed and Updated

Given the rapid pace of technological advancements and healthcare innovations, it is crucial to stay informed about the latest developments in digital health. Attend conferences, webinars, and seminars, and subscribe to relevant journals and publications. This proactive approach will not only enhance your understanding of the field but also demonstrate your commitment to staying current in a dynamic industry.

Utilize Resources

The six MSc programs provide a range of resources to support your academic and professional development. Take advantage of the libraries of each University, research facilities, and specialized software available to you. Seek guidance from faculty members, academic advisors, and career services to help navigate challenges and make informed decisions about your academic and career path.

Time Management and Balance

Balancing academic commitments with personal and professional responsibilities is essential for success. Develop effective time management strategies, prioritize tasks, and create a realistic schedule that allows for a healthy work-life balance. Remember that self-care is crucial for sustained academic excellence, so be sure to prioritize your well-being.

Professionalism and Integrity

As a student in the MSc in Digital Health program, you are not only representing yourself but also contributing to the reputation of the program. Uphold the highest standards of professionalism and academic integrity. Respect the ideas and contributions of your peers and collaborate in a manner that fosters a positive and inclusive learning environment.

Feedback and Continuous Improvement

Embrace feedback as a tool for growth. Seek constructive criticism from faculty members and peers and use it to refine your skills and knowledge. The ability to adapt and learn from feedback is a key attribute in the rapidly evolving field of digital health.

Ability to follow courses in other Universities of the Alliance

As a student of one of the six MSc programs, you will have the ability to follow a course of interest in any of the six collaborating Universities, as long as, it is offered by both the University at which you attend the MSc program and the University at which you intend to follow the course (i.e. a student who attends the MSc program at UKA can follow a course at IPP, as long as it is provided by both Universities).

Enjoy the Journey

Finally, remember to enjoy the journey. The MSc in Digital Health offers a unique opportunity to be at the forefront of transformative change in healthcare. Embrace the challenges, celebrate your successes, and take pride in being a part of a community dedicated to shaping the future of digital health. We wish you a fulfilling and successful academic experience in the MSc in Digital Health!

V. Being a Student

Student assessment

The continuous assessment process throughout the semester is supported in the mandatory existence of at least three assessment moments. Depending on the specificities of each curricular unit, assessment can be done exclusively through tests, or include mini-tests (in person or via an electronic platform - Moodle), delivery of laboratory reports, among others. There are also curricular units with a project nature, which are prepared and evaluated throughout the semester, with interim goals previously defined.

The need to coordinate in a balanced way the high number of assessment moments to which students are subject leads to the implementation, at the beginning of each semester, of a meeting with the pedagogical committees of each course and the professors responsible for each curricular unit to establish the scheduling of assessment moments for each semester. It is also the responsibility of the course's pedagogical committee to ensure the adequacy of the assessment to the learning objectives of each curricular unit.

The various evaluation moments for each curricular unit are defined in the first week of each semester and posted on an electronic platform of each University, which will contain the description of all curricular units as well as information regarding the objectives, and the operation of each unit. On this platform, elements for evaluating the curricular unit are also available, as well as summaries of the classes taught.

There is also a concern to ensure that the effort expended by each student in each curricular unit is consistent with the number of credit units accredited to the respective curricular unit. It is considered that one credit unit corresponds to 28 hours of student work, including hours of contact with professors and hours of independent work.

Most of the different curricular units have two aspects: a more expository aspect (theoretical or theoretical-practical classes) and another more practical aspect. While the fundamental concepts are presented in theoretical classes, practical classes provide students with "hands-on" knowledge that allows them to gain self-confidence and technical skills that will allow them a high degree of autonomy in developing their professional activity. The curricular units are organized in a way to encourage the spirit of group work in students, aiming at stimulating students' ability to research and select information essential for any professional in this area. Complementing the training acquired by students in soft skills CUs (i.e. Entrepreneurship), several CUs include in their

assessment public presentations and discussions of work that allow students to develop their communication skills.

Student participation in scientific activities is encouraged in all curricular units of this cycle of studies. The complementary bibliography of the CUs is normally made up of scientific articles that serve as a basis for the preparation of initial research work, often written in the form of a scientific publication. Students are also invited to attend scientific lectures, often given by foreign and national researchers visiting the Universities. In the particular case of this study cycle, lectures with professionals from companies/public organizations in the health area will be encouraged.
Finally, when preparing their dissertations, students may choose to carry out their work in cooperation with companies/public organizations in the health area, or they may choose to be integrated into research projects and encouraged to write articles for subsequent submission to international conferences.

Contact details

The University Hospital and Medical Faculty at the RWTH Aachen (UKA)

ahi@academy.rwth-aachen.de

+49 241 80 23584

https://master-applied-health-informa3cs.com/

Tel Aviv University (TAU)

talsofer@tauex.tau.ac.il

+972-3-6406035

Institut Polytechnique de Paris (IPP)

ds4health-master@ip-paris.fr

+33181872044

https://www.ip- paris.fr/en/educa3on/masters/computer- science-program/master-year-1-digital- skills-health-transforma3on-ds4health

Universidade NOVA de Lisboa (FCT)

rlg@fct.unl.pt

+351 212948545

Medical University of Vienna (MUVI)

ds4health@meduniwien.ac.at

+43-1-40400 – 24680

https://meduniwien.ac.at/ds4health

University of Ioannina (UOI)

info-ds4health@uoi.gr

+302651005582

https://ds4health.uoi.gr

The University Hospital and Medical Faculty at the RWTH Aachen (UKA)

The MSc program fees for UKA are **€26.600 (4 installments à €6.650) plus semester fee (€320)** of RWTH Aachen University.

Tel Aviv University (TAU)

For Tel Aviv University, the **course fees are $11,000** plus a **registration fee of $150.**

Institut Polytechnique de Paris (IPP)

The course fees regarding IPP are the following:

- For an EU student: **€4.880 per academic year**
- For a non-EU student: **€7.181 per academic year**

Universidade NOVA de Lisboa (FCT)

For FCT, the tentative program fee is approximately **€1.500 per year,** and a total of **€3.000 for the entire MSc program**.

Medical University of Vienna (MUVI)

For MUVI, the course fees are estimated to **3.750€ per semester**, resulting to a total of **15.000€ for the entire MSc program duration**.

University of Ioannina (UOI)

The MSc program fees for the University of Ioannina are approximately **2.500€ per year και 5.000€** for the **entire MSc program.**

Living Costs

The living costs vary between the six allying countries that participate in the DS4Health program. For each country, details on the living costs are briefly given below.

University Hospital and Medical Faculty at the RWTH Aachen (UKA)

The monthly living costs in Aachen are approximately €1132 per month. The detailed breakdown provided by RWTH University is provided in the table below:

Monthly expenditure	Minimum cost per month
Accommodation and associated costs, such as electricity, heat, water, Rundfunkgebühr (TV license fee), and internet	Approx. €470
Food and general expenses	Approx. €400
Health insurance	Approx. €110
University fees (monthly proportion of the student body and social contribution fee)	Approx. €52
Books and materials	Approx. €100
Total	**Approx. €1132**

Tel Aviv University (TAU)

The expenses per month in Tel Aviv are approximately €962-€1272, depending on the accommodation type. The detailed breakdown provided by Tel Aviv University is provided below.

Monthly expenditure	Minimum cost per month
Accommodation	Approx. €590-€900
Food and general expenses	Approx. €250
Public transportation	Approx. €50
Communications	Approx. €12
Coffee	Approx. €60
Total	**Approx. €962-€1272**

Institut Polytechnique de Paris

Preparing for a period of study abroad means preparing your budget! To help you, take a look at the table of different expenses you are likely to incur on campus. These amounts are given as a guide only and based on average prices. You are advised to set your total budget higher than what is indicated here in order to account for other necessary expenses (food, clothes etc.), going out in Paris and visiting the region.

Monthly expenditure	Minimum cost per month
Accommodation	Approx. €510
Food and general expenses	Approx. €300
Public transportation	Approx. €38
Communications	Approx. €25
Coffee	Approx. €60
Complementary health insurance (optional)	Approx. €10-€40
Total	**Approx. €943-€973**

Universidade NOVA de Lisboa (FCT)

Portugal is one of the most affordable places to live in Europe. Combine that with beautiful weather, along with great food, and it's easy to see why so many people are choosing to make Portugal their home. Here are some cost references (average values) that you can count on:

Monthly expenditure	Minimum cost per month
Accommodation	Approx. €250-€500
Food and general expenses	Approx. €250
Public transportation	Approx. €40
Communications	Approx. €2
Coffee	Approx. €60
Total	**Approx. €625-€875**

b. Living costs

VII. Fees and registration

Medical University of Vienna (MUVI)

The monthly living costs in Vienna are approximately €1000-€1200. An estimation of the breakdown provided by MUVI is depicted below:

Accommodation	Approx. €500-€700
Food and general expenses	Approx. €300
Public transportation	Approx. €100
Communications	Approx. €30
Coffee	Approx. €70
Total	**Approx. €1000-€1200**

University of Ioannina (UOI)

The monthly living costs in the city of Ioannina may range between €605-€855 in average. A detailed breakdown of the monthly costs is presented below:

Accommodation	Approx. €200-€450
Food and general expenses	Approx. €300
Public transportation	Approx. €30
Communications	Approx. €15
Coffee	Approx. €60
Total	**Approx. €605-€855**

Digital Skills for Healthcare Transformation

DS4Health

www.digitalskills4health.eu

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