Presentation

This programme is the first Master’s Programme in Data Science specific for the Travel & Tourism and cultural sectors at national and international level.

Travel & Tourism and Culture are among the most complex industries from the point of view of integrating, analysing and processing data. This is evident considering the number and variety of the organisations involved and the multiplicity of digital footprints tourists and visitors leave online before, during and after their travel/visit. These footprints allow businesses to follow and map their behaviour, preferences and attitudes.

In spite of this potential, most companies are capturing only a fraction of the value coming from data integration. One of the biggest barrier is the lack of the right talents, with specific skills not only to manage a huge amount of structured and unstructured data, but also to identify new solutions thanks to a good knowledge of the particular context of application.

The need of Data scientists specifically trained for the travel & tourism sector is substantiated by the willingness of important companies to support this new Master’s programme specifically devoted to their business.

The key features of the programme are:
• "hands-on" approach: the Master's will take the form of a permanent workshop where students will be invited to apply the knowledge acquired immediately to resolve case studies proposed from day one in collaboration with partner companies.

• a business approach to data science: technological skills for data analytics will be developed to answer business needs and interact with the management, thanks to
  - the involvement and support of some major companies in the programme,
  - the strong connection between management and data analytics content,
  - the focus on problem modelling and problem-solving skills.

• development of individual and professional skills: students embark on a high level post-graduate training programme and a career orientation process;

• connection with research, enabling students to remain constantly up-to-date and focussed on the innovation in the field of data science related to the tourism and cultural sector.

Aims
The Master’s programme aims at developing a new professional profile - a “data scientist” specialised in the Travel & Tourism industry - who will be in charge of:

- identifying, extracting, manipulating and managing, with suitable tools, relevant data for companies of the travel & tourism industry, cultural sector, public tourism organisations;
- giving meaningful and concrete answers, useful to develop appropriate strategies and actions and to create new business models.

The data scientist will have access to different professional careers in Travel & Tourism and cultural companies, in areas such as:

• Data science, analysis and engineering
• Revenue management
• Demand management
• IT management and development
• Business development

He/she will engage directly with the management of the company and contribute to plan and develop new products and travel experiences, new analytical and predictive models of tourist demand, new solutions to communicate and place products.
Teaching activities

TEACHING 1
Travel, Tourism and Cultural Industries Management

Module 1 – Travel & tourism industry and tourism destinations (Digital processes and multichannel distribution)
Module 2 - Main stakeholders: business models, activities and information flows
Module 3 - Visitors, tourists and customers in the digital and social market: how to track them and interconnect them
Module 4 - English for digital tourism

TEACHING 2
Mathematics and Statistics

Module 1 - Introduction to Data Science: tools and methods
Module 2 - Mathematics and network analysis
Module 3 - Statistics and Data Analytics

TEACHING 3
Data Analysis and Computational Thinking

Module 1 - Machine learning
Module 2 - Computer science (advanced)
Module 3 - Database and business intelligence
Module 4 - Information retrieval and data mining

TEACHING 4
Project Management

Within this course the students will be required to develop and manage their own data science project using the data provided by the business partners of this Master's program. Students will work in teams and will be asked to engineer and analyse the data, but also to design the business case and to carry on a cost/benefit analysis. This hands-on activity will provide the students with the skills needed to manage projects such as team working, team organization and coordination, project planning and use of support tools.
Duration and summary of course activities and credits (crediti formativi, ECTs)
The Master's Programme lasts one year and comprises 475-hours of teaching. A 500-hour internship is integral part of the course and, as such, an excellent future job opportunity. 1500-hours for a total of 60 CFUs are given over to study, including individual study and the preparation of a final thesis.

Qualification awarded
Students who have attended the course activities, completed their placement and drawn up their final dissertation will be awarded the qualification of Master universitario di primo livello in Data Science for Travel, Tourism, and Culture.

Period
from February 2018 to February 2019
**Course calendar**
Full time (from Monday to Friday)
* The course calendar will be finalized in detail sufficiently in advance of commencement of course activities and can be consulted on the official website of the Master
The period of classroom learning will be followed by an internship in leading private and public companies in the sector to complete the high-level training offered by the Master's. During the internship period students – supported by an academic tutor and a company tutor – will also develop a project work in which the methodological tools acquired during the courses will be applied to the internship experience. The presentation and discussion of this project work represents the final assessment of the programme.

**Teaching method**
The Master's programme will include labs, hands on activities, face-to-face and interactive lessons, company testimonials, project work, visits, participation to conferences and exhibitions, case studies and workshops.

**Language**
The main language of the courses is English.

**Attendance**
Attendance is monitored through signature of the course register. Successful completion and passing of each module is conditional upon regular attendance. Students must not in any case be absent from more than 20% of the total number of hours of lessons and have to attend to every live session. Credits are awarded upon passing the individual modules, with the completion of placement activities and passing of the final assessment.

**Course venue**
Villa Mocenigo – Oriago di Mira (VE)/ Venezia Marghera (VEGA Parco Scientifico Tecnologico di Venezia - Edificio Porta dell’Innovazione)

**Admission requirements**
FIRST LEVEL
Annex: Call for applications Master’s in Data science for travel, tourism, and culture

/ Pre-reform university degree / diploma and three-year degree in mathematics, physics, statistics, computer or management engineering, information sciences.
The course is open to business graduates majoring in computer and computational sciences (or at least with a solid quantitative orientation) or other graduates with proven work experience in the above fields. In these cases, the specific skills will be assessed by CV and interview.
/ Equivalent foreign university qualification in an appropriate subject, subject to approval by the teaching staff
/ English level: fluent

Admission applications
Applications must be submitted by filling in the online admission application, details of which are outlined in the article 3 of the Announcement of selection. Only applications accompanied by all required documentation will be considered. The call for applications and related documentation can be found and downloaded on the information webpage about the Master.

Selection procedure
Access to the Master’s programme is restricted and is granted through a selection process.
The selection process includes the screening of curricula, interviews assessing the candidates’ drive, attitude, computer science and data analytics knowledge, English language skills.

Admissibility of undergraduates
Undergraduates may be admitted to the course on condition that they obtain their degree necessarily within one month of the commencement of course activities.
In such a case enrolment on the Master course may be completed only after the qualification required for admission is awarded.

Number of places available
/ The maximum number of places available is 20
/ The Master programme will be held subject to a minimum number of 15 enrolments

Fee: € 12,000
/ 1st installment December, 19th 2017: € 6,016 (including the revenue stamp of € 16)*
/ 2nd installment June, 19th 2018: € 6,000
* The cost of the stamp is not refundable

Annex: Call for applications Master's in Data science for travel, tourism, and culture
Revenue stamps
For the Italian Law is compulsory to put a revenue stamp of € 16 on every application you present to a Public Institution and on every certificate the Public Institution provides.
The students are therefore requested to pay for:
1 revenue stamp on the enrollment application
1 revenue stamp on the final exam application
1 revenue stamp on every extra certificate they in case will request.

Loans and financial assistance
Scholarships covering wholly or partially the tuition fee will be provided by tourism and mobility companies.

The information regarding scholarships and loans (if granted) is updated on the page dedicated to the Master [http://www.unive.it/pag/29080/](http://www.unive.it/pag/29080/)

Enrolment
SUBMISSION OF ADMISSION APPLICATIONS (article 3 of the call 2017-18)
within December, 6th 2017
SELECTION
December, 11th 2017
COMMUNICATION OF SELECTION RESULTS
within December, 13th 2017
COMPLETION OF ENROLMENT PROCEDURE (article 6 of the call 2017-18)
within December, 19th 2017

Director
Pr Raffaele Pesenti

Website
http://www.unive.it/pag/29080/

Information
For information about submission of admission applications, please contact the Coordinating Office:
Ca' Foscari Challenge School:
tel. +39 041 234 6853 (9am - 1pm)
fax+39 041 234 6801
e-mail: master.challengeschool@unive.it
/ for information about the course contents and calendar please contact: 
e-mail: masterdata@unive.it
fedem@unive.it

Annex: Call for applications Master's in Data science for travel, tourism, and culture