



**European  
Leadership  
University**

## **Master of Data Science**

Prepare for the hottest job in the tech age  
by mastering the skills in data science



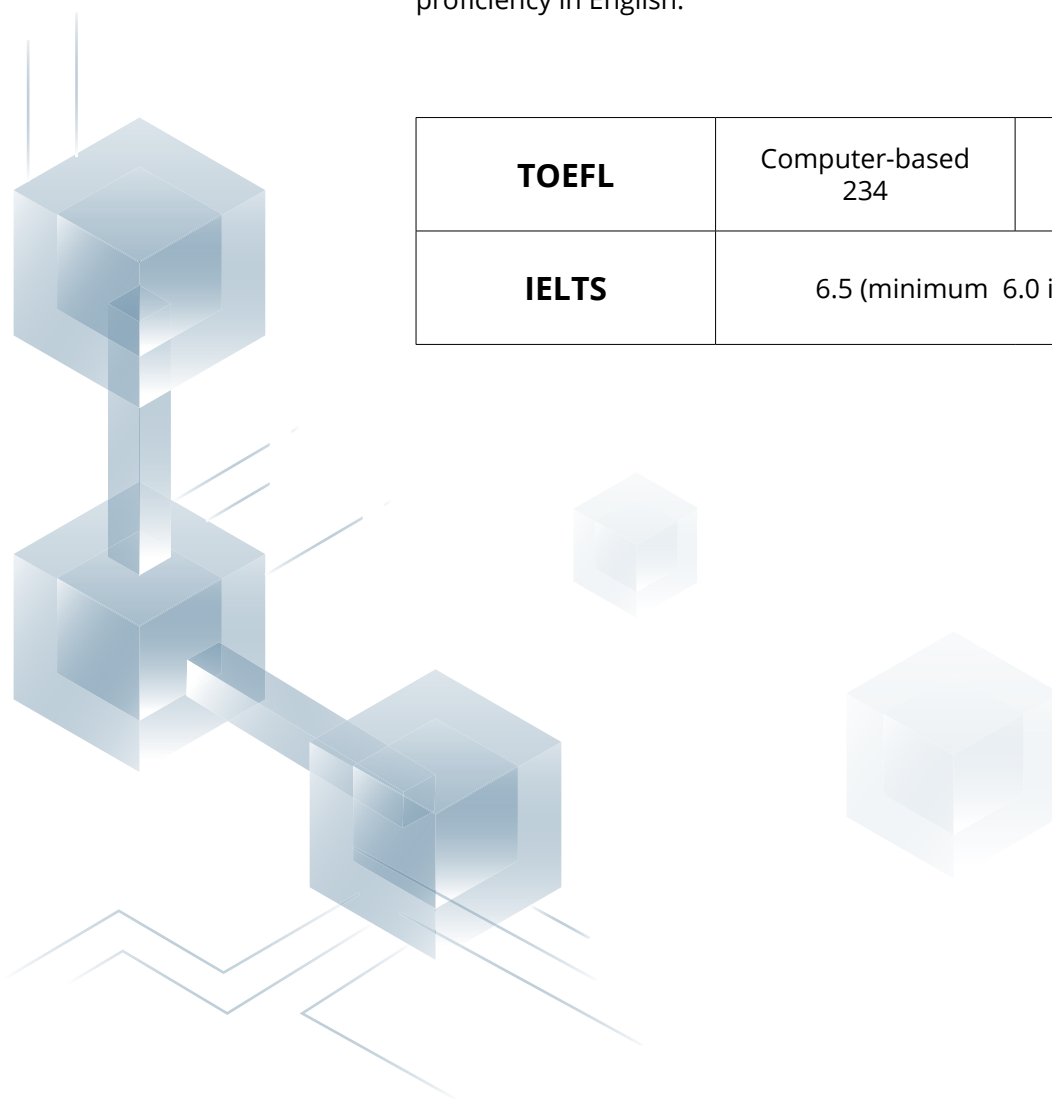
<b>Programme Title</b>	Master of Data Science
<b>Duration</b>	12-15 months
<b>Start Dates</b>	February 2019, November 2019
<b>Education Model</b>	Campus and online – 60 ECTS. You are offered both face-to-face and digital learning experience throughout the programme.

Comprehensive digital course materials, assignments, projects and e-libraries are provided through the online platform while you can be part of a thriving on-campus experience involving workshops, hackathons, action learning groups and mentoring. ELU has been awarded university status by YODAK in Cyprus and is pending accreditation by NVAO in Netherlands.

**Who Should Apply?** You should join this programme if you want to start a new career in data science or upgrade your skills and boost your employability for data science jobs, if you consider working as a free-lance data scientist or want to start your own business.

You must at least a bachelor’s degree in a computing field or its equivalent in STEM (Science, Technology, Engineering & Mathematics) and knowledge & experience in Statistics and Calculus. Python Programming is preferred. You must have the following language proficiency in English.

<b>TOEFL</b>	Computer-based 234	Internet-based 90-91
<b>IELTS</b>	6.5 (minimum 6.0 in each band)	



## Why Data Science?

The immense volumes of data generated since the dawn of the digital age is now taking over the world and changing the way we understand business, people and their behaviours. Organisations from the sciences to healthcare, from finance to the Internet are trying to make sense of the big data originating from a dizzying array of sources and they are on the lookout of skilled people to help lead their business using big data.

According to Glassdoor Job Score determined by three combining factors: number of job openings, salary and overall job satisfaction, Data Scientist is ranked number one with a median base salary of \$110,000 and 4,524 job openings in the USA.

Harvard Business Review names "data scientist" job as *the sexiest job of the 21st century*. It also points out to a shortage of data scientists becoming a serious constraint.

## The Skill Set You Will Acquire

**Python Programming:** Use Python to manipulate, analyse and visualise data.

**Data Collection:** Import data from various sources.

**Data Manipulation:** Convert raw data into a form ready for analysis, tidy and clean data for analysis, and implement data manipulation techniques prior to analysis.

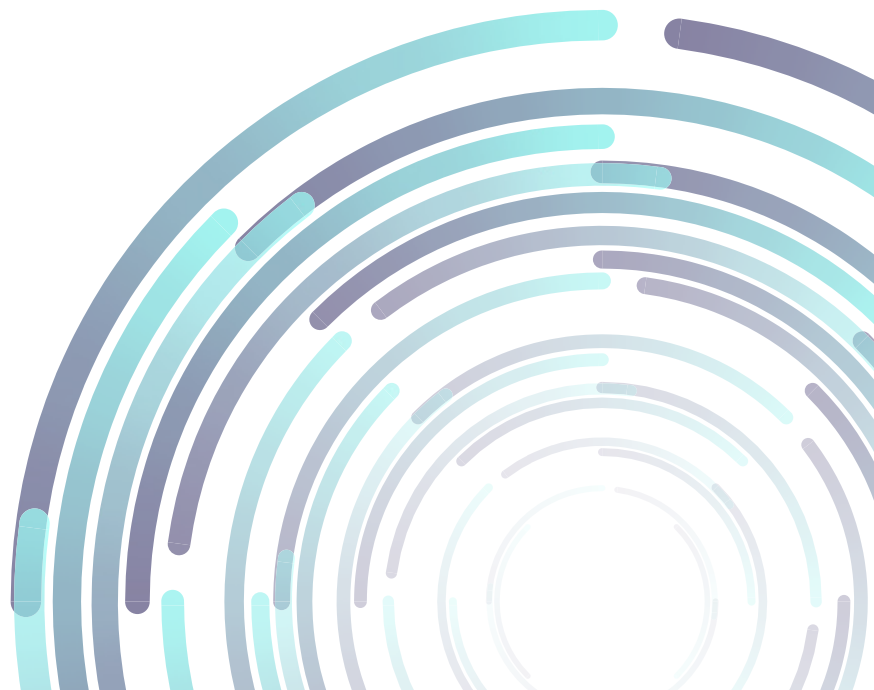
**Communication of Data:** Explore large sets of data, communicate, present and interpret critical data-driven findings & insights.

**Statistical Analysis:** Apply statistical method to infer meaning from data and find relationships in the data.

**Model Building:** Determine the right approach to solve problems, build predictive models based on structured and unstructured data, and compare models for accuracy and efficiency to find an optimal solution.

**Trusted Advisor:** Advise businesses and create impact using your leadership skills.

**Team-player:** Work in teams effectively in data science projects.



## Programme Modules

<p><b>Module 1: Embarking on Data Science</b></p>	<p><b>Module 2: Engaging with Learning Tools and Resources</b></p>	<p><b>Module 3: Mastering the Basics</b></p>
<p>Engage with each other and the programme, and explore the data science domain and essential data science competencies in this module. Discover your learning preferences and practice how to work with your action learning group.</p> <p>Face-to-face and online</p>	<p>Acquaintance yourself with the learning tools &amp; resources and learn how to build your professional e-portfolio to showcase your skills in data science for prospective employers.</p> <p>Face-to-face and online</p>	<p>Master the basics of data analysis with Python – the most powerful programming language used by data scientists. This module gives you a practical start with data visualisation and Python essentials such as functions, iterators and lists..</p> <p>Face-to-face and online</p>
<p><b>Module 4: Getting Serious with Data</b></p>	<p><b>Module 5: Understanding DataFrames and Manipulating Data</b></p>	<p><b>Module 6: Data Visualisation &amp; Statistics</b></p>
<p>Learn how to get the data you need for your data science project from different sources like excel files or the Web through APIs, and prepare your data for better analysis. Get serious by exploring your data more deeply and discover new insights.</p> <p>Face-to-face and online</p>	<p>Advance your skills in data analysis and data manipulation in pandas – the most widely used Python library for data science and learn how to interact with relational databases and build your own in this module.</p> <p>Face-to-face and online</p>	<p>Become a master at communicating your insights by creating interactive data visualisations and hone your hacker statistics toolbox by performing statistical inferences, constructing and testing your hypotheses.</p> <p>Face-to-face and online</p>
<p><b>Module 7: Advanced Techniques in Data Science</b></p>	<p><b>Module 8: Being an Agile Leader &amp; Developing Researcher Competence</b></p>	<p><b>Module 9: Bringing it all Together</b></p>
<p>Learn how to utilize advanced techniques in data science to not only build &amp; tune predictive and deep learning models but also make sense of networks by using real world network data.</p> <p>Face-to-face and online</p>	<p>Build value from your data by applying the agile methodology in your data science project and finally learn how to pilot and implement change in your organisation. Also start building the foundation of your Final Project by developing your competence in the action research methodology.</p> <p>Face-to-face and online</p>	<p>Become a leader and a trusted advisor by bringing all you have learned together and present your final project in your organisation.</p> <p>Face-to-face and online</p>

## Elu Approach & Data Science

ELU educational model enables you to earn your data science degree while you practice skills through workshops and meetups, action learning groups and work-based projects. Our mentors and facilitators support and guide you in your learning journey. You not only gain mastery in the science of data but also learn the art of leadership to become a change agency in your organisation.

Learning experience is **flexible** at ELU because you are not restricted to physical classrooms as in traditional universities. Through our online learning platform, you have access to your learning resources any time you need. You learn from the best digital interactive content.

Learning experience is **practical and adaptable** at ELU. You not only gain the necessary domain knowledge in data science but also practice by doing. You acquire the right skills for the job market through assignments, projects and workshops that address your learning preference.

Learning experience is **community-based** at ELU. While some of your work will be self-directed, you are part of a community of peers, mentors and facilitators who assist you in action learning groups or through one-on-one mentorship. Your mentor will interact you on a regular basis to help you get through the challenges throughout the programme. Also, your team projects will help prepare for your data scientist role which requires a lot of collaboration with others.

## Admission Process

**Application:** Fill in the application form and submit the following documents: Motivation letter, Diploma or a document as proof of graduation, English proficiency documents.

**Selection:** Our academic board will review your application and may call for an interview for a final decision. You will then be notified about the result of your application and scholarship offer.

**Enrolment:** Upon selection, you can complete your application process by paying the tuition fee and start your programme.



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