



UNIVERSITÀ
DEGLI STUDI
DI BERGAMO

Dipartimento
di Scienze Economiche

Economics and data analysis

Master degree

DATA

5 aprile 2025

SEDE

Via dei Caniana 2, Bergamo

Why choosing the EDA master?

- MSc EDA equips students with the tools necessary to confront the **emerging economic challenges** of the **information and big data era**.
- EDA provides a unique blend of **advanced knowledge of economics** and hands-on experience in utilizing **cutting-edge statistical methodologies** to process and interpret economic data.
- EDA combines the benefits of **small class sizes**, fostering relational and communication skills, with a strong **international orientation**.



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Why choosing the EDA master?

- Through EDA, students hone critical analytical abilities tailored to navigate **complex economic decision-making processes** and assess the consequences of **economic choices and policies** across various sectors, either in **private enterprises** or in **public institutions**.
- EDA caters to ambitious individuals aspiring for distinguished careers as **economists**, spanning across a spectrum of industries and organizational settings, including **national and international institutions**.



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Why choosing the EDA master?



Master's degree program
ECONOMICS AND DATA ANALYSIS
Department of Economics

Program ▾ Studying ▾ Opportunities ▾ How to ▾ Contacts ▾ Always useful ▾



EA Ranking 2021: EDA in Top 10

Classifica	Università	Punteggio	Esperienze all'estero	Tirocini esterni	Esperienza studenti
1	Verona	90,3	20,9	63,3	79,4
2	Bologna	87,0	22,7	45,4	80,1
3	Trento	85,8	34,5	48,9	36,4
3	Venezia Ca' Foscari	85,8	24,7	57,8	39,8
5	Torino	81,4	19,0	55,0	49,4
6	Bergamo	78,3	19,6	49,2	36,5
7	Pavia	77,2	32,5	23,6	83,8
8	Trieste	76,7	25,6	50,0	44,4
9	Piemonte Orientale	73,0	18,3	48,7	49,0
10	Modena e Reggio Emilia	72,8	18,3	42,2	25,5



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Career opportunities

- The program covers a diverse array of **economic subjects**, spanning from advanced microeconomics and macroeconomics to labor economics, industrial organization, economic growth, and economic policy.
- Additionally, students delve into **computational and statistical techniques** such as advanced econometrics, data production and analysis, coding and machine learning.
- Through hands-on projects, students learn how to use various **programming languages** and **data sources**, ranging from firm financial statements to official statistics and big data sets.
- Accordingly, EDA graduates are fully equipped to excel in **prestigious careers as economists** in today's information and big data-driven environment.
- By equipping students with advanced economic knowledge and state-of-the-art statistical skills, EDA prepares them for roles as **managers**, economic **consultants**, **analysts**, or **researchers**, in both private and public sectors.
- Students also build the background for excelling in **Ph.D. programs in economics** worldwide.



Career opportunities: profiles & employers

Economists

Experts in economics, both at the micro and at the macro level. They are able to perform empirical analyses using advanced statistical and econometric methods, and have the economic knowledge to interpret the results. They can support the effective decision-making process and strategic business choices in all market segments of manufacturing and services.

Employers include: Large companies, banks, research centers, consulting companies, competition and market authorities, national and international agencies, universities, non-profit organizations, economic press agencies.



Career opportunities: profiles & employers

Economic data analysts

Have the methodological knowledge to develop and implement statistical, data mining and econometric models, as well as machine learning techniques, for the analysis and prediction of firm performance and markets. They are also proficient in the use of mathematical and statistical software for data management and algorithm development.

Employers include: Companies in data analytics sectors, banks, insurance companies, economic consulting companies, research centers and international institutions in Official Statistics (Eurostat, NSI, OCDE, WB, BCE, National Banks,...).



Career opportunities: profiles & employers

Business managers

In all cases in which statistical knowledge in handling and understanding a large amount of economic data and in using data for economic decision making is a crucial requirement.

Employers include: Large, small and medium-size firms, in private and public sectors, both in manufacturing and in services; consulting companies; non-profit organizations.



Topics and subjects

- **Economics:** Advanced Microeconomics and Macroeconomics, Applied Economics (Labor, IO), Impact Evaluation, Economic Policy, Economic Growth, ...
- **Econometrics- Statistics:** Advanced Econometrics, Computational Statistics, Applied Statistical Modelling, ...
- **Data analysis:** Data Production and Analysis, Coding and Machine Learning, Text Mining and Sentiment Analysis, Neural Networks and Deep Learning, ...



Two curricula

1. **Economics**
2. **Data Science** (DS)
 - **European Master in Official Statistics** (EMOS)

Both tracks provide a deep knowledge of economics, alongside experience with computational and statistical methods, data management and programming languages.

1. The **Economics** curriculum is focused on economics and has a strong empirical orientation.
2. The **Data Science** curriculum places more emphasis on statistics and data management techniques for economics.
 - The **EMOS** label offers a deeper knowledge of methods for official statistics; an internship at a certificated institution (ISTAT) is compulsory for EMOS.



Curriculum *Economics*

FIRST YEAR (a.y. 2025-2026)		CFU	LEZ
Probability and Statistics		3	24
Advanced Microeconomics and Macroeconomics:		12	96
<i>Advanced Microeconomics</i>	6		
<i>Advanced Macroeconomics</i>	6		
Coding and Machine Learning:		12	96
<i>Coding for Data Science</i>	6		
<i>Machine Learning for Economics</i>	6		
Advanced Econometrics		6	48
Labor Law, Digital Technologies and Robotization		6	48
or			
Emerging Technologies Law		6	36
Empirical Methods in Impact Evaluation		6	48
Personnel Economics and HR Analytics		6	48
Industrial Organization: Theory and Applications		6	48
Soft & Complementary Skills		3	
SECOND YEAR (a.y. 2026-2027)		CFU	LEZ
Financial Instruments and Digital Finance		12	96
European Economic Policy		6	48
Digital Transformation and Policies		6	48
Economic Growth and Sustainability		6	48
or			
Public Policies for Sustainability and the Environment			
Elective courses		12	
Final dissertation		18	



Curriculum *Data Science*

FIRST YEAR (a.y. 2025-2026)		CFU	LEZ
Probability and Statistics		3	24
Advanced Microeconomics and Macroeconomics		12	96
<i>Advanced Microeconomics</i>	6		
<i>Advanced Macroeconomics</i>	6		
Coding and Machine Learning		12	96
<i>Coding for Data Science</i>	6		
<i>Machine Learning for Economics</i>	6		
Advanced Econometrics		6	48
Labor Law, Digital Technologies and Robotization		6	48
or			
Emerging Technologies Law		6	36
Empirical Methods in Impact Evaluation		6	48
Data Production and Analysis		6	48
Applied Statistical Modelling		6	48
Soft & Complementary Skills		3	
SECOND YEAR (a.y. 2026-2027)		CFU	LEZ
Financial Instruments and Digital Finance		12	96
Computational Statistics		6	48
Big Data Management		6	48
or			
Text Mining and Sentiment Analysis			
European Economic Policy		6	48
or			
Neural Networks and Deep Learning			
Elective courses		12	
Final dissertation		18	



EMOS

EMOS offers a unique educational environment closely linked with National Statistical Offices and Eurostat, ensuring students gain insights from real-world data practitioners and cutting-edge methodologies.

EMOS incorporates **innovative teaching methods** and provides opportunities for immersive learning experiences through summer and spring schools.

Moreover, it mandates **compulsory internships** at National Statistical Offices, providing students with invaluable practical experience and professional connections in the field.

The student who graduates with the EMOS label obtains the **European Master of Official Statistics**, awarded on the basis of a selection by Eurostat to only 33 European universities in 17 countries

... and just 6 in Italy: Roma, Caserta, Pisa, Firenze, Bologna and... **BERGAMO** !!!

https://ec.europa.eu/eurostat/cros/content/emos_en



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EMOS

FIRST YEAR (a.y. 2025-2026)		CFU	LEZ
Probability and Statistics		3	24
Advanced Microeconomics and Macroeconomics		12	96
<i>Advanced Microeconomics</i>	6		
<i>Advanced Macroeconomics</i>	6		
Coding and Machine Learning		12	96
<i>Coding for Data Science</i>	6		
<i>Machine Learning for Economics</i>	6		
Advanced Econometrics		6	48
Labor Law, Digital Technologies and Robotization		6	48
or			
Emerging Technologies Law		6	36
Empirical Methods in Impact Evaluation		6	48
Data Production and Analysis		6	48
Applied Statistical Modelling		6	48
Soft & Complementary Skills		3	

SECOND YEAR (a.y. 2026-2027)		CFU	LEZ
Financial Instruments and Digital Finance		12	96
Computational Statistics		6	48
Big Data Management		6	48
or			
Text Mining and Sentiment Analysis (1)			
European Economic Policy (2)		6	48
or			
Neural Networks and Deep Learning			
Elective courses (3)		12	
Final dissertation		18	

		EXTRACURR. cfu for LABEL EMOS: Thematic Activities	6	
(1)	149011-ENG	Text Mining and Sentiment Analysis is compulsory for LABEL EMOS	6	
(2)	149006-ENG	European Economic Policy is compulsory for LABEL EMOS	6	
(3)	Compulsory for LABEL EMOS:			
	134005-ENG	Statistics for Management	6	
	110020-ENG	Internship Official Statistics (internship at NSI)	6	
THESIS PACKAGES for LABEL EMOS (tot. 42 cfu):			year	CFU
110026-ENG	SECS-S/01 SECS-S/06	Coding and Machine Learning	1	12
110021-ENG	NN	Thematic Activities Official Statistics 1	2	3
110022-ENG	NN	Thematic Activities Official Statistics 2	2	3
110020-ENG	NN	Internship Official Statistics (internship at NSI)	2	6
110100-ENG		Prova finale - Final dissertation on Official Statistics issues	2	18



EMOS



Internship with thesis (“thesis package”)

- compulsory for the program
- corresponds to 6 CFU
- is part of the **thesis package**, which comprises a series of activities aimed at training students to the purpose of writing the thesis
- hosted by National Statistical Institutes (ISTAT), cross-border internships, or participation in specific international programs (the Master ad-hoc Commission should evaluate and approve)

Thematic activities

- 6 CFU: second academic year
- Rolling activities: timetable and list of the events to be published



Learning activities (1)

EDA offers a comprehensive educational experience that extends beyond traditional classroom learning.

- **Seminars** offered by the Department given by scholars with international standing.
- **Workshops.** Examples:
 - Workshop on Automation, Productivity and the Labor Market
 - Workshop on Advances in Industrial Organization
- **Crash courses** to help students with difficulties attend more advanced classes:
 - Introductory Economics
 - Math for Economics
 - Econometrics

The program's extensive array of seminars and workshops provides invaluable insights into the **forefront of research** in economics and data science.

By engaging with cutting-edge topics and methodologies, students gain a deeper understanding of emerging trends and developments, enhancing their academic and professional growth.



Learning activities (2): soft skills

Teaching Quality Program

The program develops competences, via educational activities inside and outside the classroom, that promote **teamwork skills**, **ability to present** and **discuss the results** of one's work effectively.

The program offers **short courses** aimed at delving deeper into specific topics of significant socio-economic relevance.

- Advanced Report Writing
- Public Speaking
- Stat-Hackaton
- Entrepreneurial Skills
- Advanced Programming in Stata, R and Python

These courses provide students with opportunities to address challenging issues, serving as training sessions to equip them for problem-solving in their future professional endeavors.



Opportunities: internships

- The learning process can be enhanced by the direct involvement of students in an **internship**.
- This opportunity allows the student to acquire **first-hand experience** in the job market and provides a chance to practically apply what is being learned within university courses.
- It also helps students orient themselves toward choosing a professional path and acquire deeper knowledge of the job market.
- **Private Sector:** Intesa Sanpaolo, inTwig, GEFran spa, Wurth, Compass Lexecon, Mediolanum, SEA Milano, ...
- **Public Sector:** ISTAT, Istituto per la Ricerca Sociale (IRS), REF, Confindustria BG,...
- **International Institutions:** World Bank, IMF, Inter American Development Bank, ...



International opportunities (1)

Double Degree with MSc Economics - European Economic Integration (Trier University)

2 years of study (four terms) = 120 CFU

- 1st year at Bergamo University EDA, curriculum *Economics*: 60 CFU
- 2nd year at Trier University (Germany): 30 CFU exams + 30 CFU final dissertation

Max 5 students of the EDA program per a.y., subject to selection.

Requirements: At least 12 CFU at the moment of submitting the application and 60 CFU before September 2026. Applications in Spring 2026.

Selection: Based on number of CFU, average mark, CV, motivation letter and interview.



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International opportunities (2)

Erasmus+ program. Examples:

UE

Maastricht University (The Netherlands)
Freie Berlin Universitat (Germany)
ESC Clermont, Graduate School of Management (France)
Molde University College (Norway)
Cracow University of Economics (Poland)
University of Exeter (United Kingdom)
Geneva School of Economics and Management (Switzerland)

EXTRA-UE

University of Technology Sydney (Australia)
Peking University HSBC Business School (China)
Fairleigh Dickinson University – Madison, NJ (USA)

Erasmus+ Traineeships

<https://en.unibg.it/global/going-abroad/erasmus>



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Visiting professors

Every year EDA hosts international **visiting professors** from all over the world.

Examples:

- [Christian Bontemps](#), Toulouse School of Economics (TSE)
- [Inmaculada Cebrian Lopez](#), Universidad de Alcala de Henares
- [Steven Fazzari](#), Washington University in St. Louis
- [Roberto Galbiati](#), Sciences Po and CNRS
- [Virgilio Gomez Rubio](#), University of Castilla-La Mancha
- [Orietta Marsili](#), University of Bath
- [Yeva Nersisyan](#), Franklin & Marshall College
- [Alain Pirotte](#), CRED - University of Paris II and TEPP
- [L. Randall Wray](#), Levy Economics Institute of Bard College
- [Thomas Zwick](#), University of Julius-Maximilians Universität Würzburg (JMU)



How to apply: admission requirements (1)

Students holding an **Italian bachelor** degree in classes **L-18** or **L-33**:

- direct admission if the final mark at the Bachelor is at least 81/110;
- an **interview** if the final mark at the Bachelor is below 81/110.

Students holding an **Italian bachelor** degree in classes **other than L-18** or **L-33**:

- a minimum of **48 ECTS** in one or more of the following areas: Economics, Business and Management, Statistics, Mathematics, Law, Sociology;
- then:
 - direct admission if the final mark at the Bachelor is at least 81/110;
 - an **interview** if the final mark at the Bachelor is below 81/110.



How to apply: admission requirements (2)

- For **all applicants**: knowledge of English language corresponding to level B2, according to the Common European Framework of Reference for Languages (CEFR).
- Students **not yet graduated** in October, but scheduled for graduation in the Spring session, can enroll, under reserve, if the missing exams do not exceed 24 CFU.
- For students **not yet graduated** at the time of pre-enrollment, the above admission criteria hold if the weighted average of the marks at the Bachelor's is at least 22/30.
- More info available at: <https://ls-eda.unibg.it/en/how/how-enroll>



Application procedures and deadlines

Application procedures and deadlines are available on EDA's website.

To reach the pertinent page, the selection menu is the following:

[How to enroll | UniBG ECONOMICS AND DATA ANALYSIS](#)

At the link:

<https://ls-eda.unibg.it/en/how/how-enroll>



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Scholarships

The University of Bergamo supports students through scholarships, international mobility contributions, graduation awards and special contributions.

<https://en.unibg.it/study/enrollment/foreign-students-join-us/fees-grants-and-scholarships>

Notices for open rankings can be found at: <https://en.unibg.it/life-at-unibg/students-office/scholarships>

Applications can be made online: for any other information please contact directly the Right to Education Service.



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Contacts

For further information

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<https://ls-eda.unibg.it/en>

<https://www.unibg.it/studiare/corsi/offerta-formativa/economics-and-data-analysis>



Find out more



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