



UNIVERSITÀ  
DEGLI STUDI  
DI BERGAMO

Dipartimento  
di Scienze Economiche

# MASTER in ECONOMICS and DATA ANALYSIS

## EDA

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

[www.unibg.it](http://www.unibg.it)

### CONTACTS

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# WHY CHOOSING EDA?

- MSc EDA responds to the new challenges of **data-driven markets** in the age of information.
- EDA provides a **unique blend** of **advanced economic** knowledge, cutting-edge **statistical methods** and hands-on experience in processing and interpreting data.
- EDA program matches the benefit of **small classes**, which allow also for relational and communication abilities, with the **international vocation** of the program.
- EDA meets the expectations of very motivated students who are passionate about economics in a **challenging environment**



# WHY CHOOSING EDA?



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

- Students develop the necessary knowledge and the fundamental skills for a **top-notch** career in **companies, institutions, businesses, research centers** and **international agencies** operating in the data-driven society.
- EDA graduates are well equipped for an effective **decision-making** process and **strategic** economic choices in private and public companies, as well as in their **own entrepreneurial business**.
- They also build the background for pursuing **Ph.D. programs in economics** worldwide.



# CAREER OPPORTUNITIES: PROFILES & EMPLOYERS

## **Economist**

Economists are 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

## Data Analyst

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, consulting companies, research centers and international institutions in Official Statistics (Eurostat, NSI, OCDE, WB, BCE, National Banks,...).



# CAREER OPPORTUNITIES: PROFILES & EMPLOYERS

## **Business Manager**

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**
  - **European Master in Official Statistics (EMOS)**

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

The **Economics** curriculum has its major in economics: both theoretical and applied.

The **Data Science** curriculum has its major in statistical methods, coding and programming.



# Economics

FIRST YEAR (a.y. 2024-2025)		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
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. 2025-2026)		CFU	LEZ
Financial Instruments and Digital Finance		12	96
European Economic Policy		6	48
Digital Transformation and Policies		6	48
Economic Growth and Sustainability <i>or</i> Public Policies for Sustainability and the Environment		6	48
Elective courses		12	
Final dissertation		18	



# Data Science

FIRST YEAR (a.y. 2024-2025)		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
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. 2025-2026)		CFU	LEZ
Financial Instruments and Digital Finance		12	96
Computational Statistics		6	48
Big Data Management <i>or</i> Text Mining and Sentiment Analysis		6	48
European Economic Policy <i>or</i> Neural Networks and Deep Learning		6	48
Elective courses		12	
Final dissertation		18	



# EMOS



The EMOS label is designed to comply with the requirements established by Eurostat and has been recognized as a **European Master in Official Statistics (EMOS)**.

The student who graduates with the EMOS program obtains the European Master of Official Statistics **label**, 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](https://ec.europa.eu/eurostat/cros/content/emos_en)



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# EMOS

FIRST YEAR (a.y. 2024-2025)		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
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. 2025-2026)		CFU	LEZ
Financial Instruments and Digital Finance		12	96
Computational Statistics		6	48
Big Data Management <i>or</i> Text Mining and Sentiment Analysis (1)		6	48
European Economic Policy (2) <i>or</i> Neural Networks and Deep Learning		6	48
Elective courses (3)		12	
Final dissertation		18	

	EXTRACURR. cfu for LABEL EMOS: Thematic Activities	
(1)	Text Mining and Sentiment Analysis is compulsory for LABEL EMOS	6
(2)	European Economic Policy is compulsory for LABEL EMOS	6
(3)	Compulsory for LABEL EMOS:	
	Statistics for Management	6
	Internship Official Statistcs (internship at NSI)	6



# EMOS

## Internship with thesis (thesis package)

- compulsory for the program
- corresponds to 6 credits
- 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 credits: second a.y.
- Rolling activities: timetable and list of the events to be published



# LEARNING ACTIVITIES (1)

- **Seminars** offered by the Department given by scholars with international standing
- **Workshops.** Examples:
  - Workshop on Advances in Industrial Organization
  - UniBg Experimental Microeconomics Summer Workshop
- **Crash courses** to help students with difficulties attend more advanced classes:
  - Math for Economics
  - Econometrics



# LEARNING ACTIVITIES (2): SOFT SKILLS

## Teaching Quality Program

The program develops competencies, via educational activities inside and outside the classroom, that promote **teamwork skills**, **ability to present** and **discuss the results** of one's work effectively, related to the use of large-scale databases.

- Advanced Report Writing
- Public Speaking
- Stat-Hackaton
- Entrepreneurial Skills





# OPPORTUNITIES: INTERNSHIPS

- The learning process is enhanced by the direct involvement of students in **internships**. It is geared toward the choice of the professional path and to the knowledge of the job market.
- **Private Sector:** Intesa San Paolo, inTwig, GEFTRAN 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

1<sup>st</sup> year at Bergamo University EDA, curriculum *Economics*: 60 CFU

2<sup>nd</sup> 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 2025. Applications in Spring 2025.

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



# INTERNATIONAL OPPORTUNITIES (2)

**Erasmus+ program.** Examples:

## UE

Maastricht University (The Netherlands)  
Freie Berlin Universität (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>



# VISITING PROFESSORS

Every year the MSc in Economics and Data Analysis 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;
- 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 (CEFRL)
- 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
- More info available at: <https://ls-eda.unibg.it/en/how/how-enroll>



# 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.



# APPLICATION PROCEDURE AND DEADLINES

Application procedure 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>





# CONTACTS

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Visit our website:  
<https://ls-egm.unibg.it/en>

Location EDA master:  
Bergamo (campus: Caniana)

