



Università
Ca' Foscari
Venezia

**Dipartimento
di Economia**

VERA /  ACADEMY

VI EDITION - CALL FOR SELECTION OF N. 12 VERA INTERNSHIP GRANTS AT THE DEPARTMENT OF ECONOMICS - A.A 2020/2021

Art. 1 – Scope

1.1 The Department of Economics, within the new Center VERA (*Venice center in Economic and Risk Analytics for public policies*), offers students enrolled in its Master's Degree Courses internship projects to promote the development of professional and research skills useful for their orientation and subsequent labor market integration.

1.2 Twelve grants are available. The maximum duration of the internship periods will be 4 months and a commitment of about 300 hours that will be agreed with the tutor of the project. The internships will take place between July and December 2021. The total funding for each internship will be € 1.843,31 (gross salary). Each internship project, including specific objectives, required knowledge and skills as well as the intern tutors, is described in Annex A, which is an integral part of this call.

1.3 The internship will take place at the Department of Economics. Due to the COVID-19 emergency, internships can take place remotely, working from home.

1.4 On request of the student, the internship activity can be validated as the compulsory internship to acquire university credits planned in the Department of Economics Master's degree program to which the student is enrolled.

Art. 2 – Admission requirements

2.1 The call is reserved for students regularly enrolled in the Department of Economics Master's Degree Courses.

2.2 If students already receive a grant economically incompatible with the grant of the present call, they can apply and, if the merit requirements are met, they can decide to carry out the internship project renouncing the grant. The total numbers of internships cannot exceed 14 (maximum of 12 with grants and maximum of 2 without grants), therefore the acceptance of internship applications "without grant" should be subject to the compliance of such limits.

2.3 These requirements must be met by the deadline indicated in the following art.3. Please note that the student status must be held also at the moment of grant acceptance and on the start date of the internship.

Art. 3 – Applications

3.1 Applications must be submitted no later than **21st June 2021 at 12.00** by one of the following procedures:

- a) sending to the following Address of Certified Electronic Mail (CEM): protocollo@pec.unive.it. Please consider that the message can only be sent by another Certified Electronic Mailbox; the application sent by a non Certified mailbox cannot be considered valid. Documents must be attached in PDF format only;
- b) sending by ordinary e-mail to the following address: centro.vera@unive.it. Documents must be attached in PDF format only;

3.2 The application form must include also the following documents:

- Dated and signed Curriculum vitae
- Self certification of exams taken (marks and numbers of university credits – *CFU, Crediti Formativi Universitari*) as well as the weighted average exam marks
- Motivation letter, using the format attached to this announcement (the motivation letter should set out in particular the student's interests, the coherence between academic background and the activities and objectives of the internship projects, as well as the preferential qualifications/skills and knowledge required for each project. See Annex A).
- Scanned copy of a valid ID document.

3.3 Applications received after the deadline or applications received through other procedures, or unsigned applications will not be considered valid.

3.4 The University is not responsible for any failure to receive communications due to incorrect or incomplete indication of address by the applicant or to the lack of or the untimely communication of change of address, as well as possible postal mistakes not attributable to the fault of the administration itself.

Art. 4 – Commission and selection of applicants

4.1 A commission appointed by Decree of the Department Director will evaluate the candidates on the basis of their qualifications and motivation letters.

4.2 In a preliminary session, the Commission will define the evaluation criteria and the scoring rules for the professional and academic curriculum vitae and for the motivation letter, as well as the minimum threshold for grant eligibility.

4.3 The ranking list will be formulated on the basis of the following criteria:

- weighted average exam marks;
- numbers of University credits (*CFU, Crediti Formativi Universitari*);
- evaluation of the Curriculum Vitae;
- evaluation of the motivation letter that should set out in particular the student's interests, the coherence between academic background and the activities and objectives of the internship projects, as well as the preferential qualifications/skills and knowledge required for each project (See Annex A).

4.4 Applications from candidates that were beneficiaries of the VERA grant in the previous call will be accepted but in the selection procedure priority will be given to candidates that never received the VERA grant.

4.3 The following applications will be excluded from evaluation:

- Applications which do not comply with the admission requirements of the announcement
- Applications which do not comply with the instructions indicated in art.3

Art. 5 –Ranking list

5.1 At the end of the evaluation process, the Commission will draw up a ranking list in order of decreasing scores of each candidate.

5.2 The ranking list will be published on the web site of the Department of Economics at the following web address www.unive.it/vera, Vera Academy section, after 28th June 2021.

Art. 6 - Assignment of grants

6.1 At the end of the evaluation process, the Secretariat of the Department of Economics will notify the selected candidates, communicating the starting date of the internship grant.

6.2 The Winners will have to send their acceptance (via e-mail to the following address: centro.vera@unive.it) within 5 days from notification. If a candidate turns down a grant, it will be assigned to the candidate ranked next.

6.3 Grants will be paid in one single instalment at the end of the internship after the submission of the final report approved by the academic tutor.

6.4 The assignment of Internship grants is subject to the possession of student status at the beginning of the internship period.

Art. 7 – Obligations for winners

7.1 Winning students, with the support of the “company” and academic tutors, **must**, as a condition of the grant, agree to carry out the approved procedures to set up their internship, to prepare training projects and all the related administrative procedures.

Art 8 - Incompatibility

8.1 The present grant can be received in conjunction with any other grants except in case of express incompatibility specified by applicable law, Regulations of the University and other specific calls in which the candidates participated (See Art. 2.2)

Art. 9 – Cross-reference

9.1 For any relevant matters not mentioned in the call, reference is made to the current University Regulation for the assignment of grants, study awards and incentives to students to sustain enrollment for courses and other specific learning activities.

Art. 10– Person in charge of the procedure

10.1 The person in charge of the selection procedure, within Law n.241/1990, is the Secretary of the Department of Economics, Ing. Silvia Lovatti. For further information concerning the selection procedure, please send an e-mail to centro.vera@unive.it

Art.11 – Processing and protection of personal data

11.1. Personal data sent by the candidates with the application forms will be processed according to national and European legislation (Italian Legislative Decree n. 196/2003 and Regulation EU 2016/679). For further information <https://www.unive.it/pag/36610/> .

Department Director
Prof. Michele Bernasconi

Person in charge of the procedure
Ing. Silvia Lovatti

ANNEX A

1. MACHINE LEARNING MODELS FOR REAL ESTATE VALUATION

PROJECT DESCRIPTION:

Real estate valuation is generally based either on discretionary approaches or on qualitative models or on simple quantitative ones. This can lead to meaningfully different valuations for similar real estates. In an attempt to remedy this deficiency, in the last 10-15 years, real estate pricing models based on supervised Machine Learning (ML) methods, such as Artificial Neural Networks, and unsupervised ones, such as Self-Organizing Maps, have been proposed in the literature. That said, the Intern will have to:

- Carry out a comprehensive bibliographic research on ML models used in real estate valuation;
- Collaborate on the development of such a model, with specific reference to the Italian real estate markets;
- Create a dataset that allows you to apply the model to real data;
- Collaborate on the implementation of the model in a Matlab, R or Python environment;
- Apply the software code developed to the dataset created and compare the results with those of appropriately chosen benchmarks.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Having passed with a good grade at least:

- an exam on data management and/or data processing and/or programming
- an exam of statistics, econometrics or data analysis
- a quantitative exam of finance or economics.

Being familiar with programming and with the use of the Matlab, R or Python environment (at least one of these environments).

Being familiar with demographic, economic, statistical data download from specialized providers and with their management (for example, cleaning, reconstruction...).

TUTOR: Antonella Basso, Marco Corazza. (estimated start date: July-December 2021)

NUMBER OF STUDENTS: 1

2. STUDY OF THE EFFECTS OF THE CORONA-VIRUS ON WORKING ARRANGEMENTS (ALSO BETWEEN GENDERS) MAKING USE OF OCCUPATIONAL CODING

PROJECT DESCRIPTION:

Supporting research on the effects of the Corona-virus pandemic for Europeans on working-from-home (or losing the job) in relation to occupational characteristics coded according to ISCO-codes, on microdata. Contribution to writing a report on the research also focusing on gender differences.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Being familiar with programs such as STATA and with quantitative analysis

TUTOR: Agar Brugiavini (estimated start date: July 2021)

NUMBER OF STUDENTS: 2

3. HAS PHOTOVOLTAIC ENERGY REACHED THE GRID PARITY IN ITALY?

PROJECT DESCRIPTION:

The fellow will support a research project aiming to determine whether PV energy production in Italy has reached the Grid Parity and, if not, how much time is still needed in order to do so. Reaching the Grid Parity is considered to be the point (in time) at which the cost of PV energy equals the price of energy produced relying on conventional energy sources such as fossil fuels or nuclear power. This research has important implications since it allows checking whether policy support is still needed in order to foster investment in PV energy production.

The fellow will be asked to collect data relative to energy prices in the Italian electricity market. S/he will then test their consistency with respect to specific stochastic processes that are assumed to illustrate their diffusion.

Further, in order to calibrate the theoretical model (set up by the applicant), s/he will be asked to collect data relative to the installation costs of PV modules. Once calibrated the model using the collected data, the fellow is expected to execute the numerical exercise needed in order to check whether the grid parity has been reached.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

The following background is essential: i) solid preparation, at master's degree level, in Microeconomics, Mathematical Analysis and Econometrics (in addition, familiarity with the theory of option's pricing would be appreciated) ii) excellent knowledge of the English language (in particular with regard to reading and comprehension) and iii) synthesis and aptitude toward critical analysis, iv) familiarity with the use of i) softwares for algebraic calculus such as Matlab, Mathematica or Maple and ii) softwares for statistical-econometric analysis programs such as STATA, R +, E-Views or SPSS.

TUTOR: Luca Di Corato (estimated start date: October 2021)

NUMBER OF STUDENTS: 1

4. STUDY OF BIBLIOMETRICS TO ASSESS THE SCIENTIFIC PERFORMANCE OF UNIVERSITIES

PROJECT DESCRIPTION:

The project is focussed on research evaluation based on bibliometric indicators: the candidate will retrieve raw data from public websites and Excel/Open Office files. Starting from these, for each university he/she will have to calculate some bibliometric indicators (h-index, g-index) using, at his/her discretion, the macros provided by Excel or more advanced scientific calculation tools (R, Matlab, Bashscript, Python or other languages of choice). In addition to bibliometric indicators, it will be necessary to retrieve the age of the individual researchers considered in the analysis.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Knowledge about Microsoft Excel/Open Office

TUTOR: Giacomo di Tollo (estimated start date: July 2021)

NUMBER OF STUDENTS: 2

5. NATURAL RESOURCES, TERRITORIAL SUSTAINABILITY AND CIRCULAR ECONOMY

PROJECT DESCRIPTION:

Pollution, wasted natural resources and climate change are just some of the pressing issues facing our society. The increase in population, production costs and pollution, now unsustainable, require the adoption of a new approach to the economy and everything that revolves around it.

The aim of the research work is the reconstruction of the cognitive framework at different territorial levels through indicators (environmental, social, economic), necessary for identifying suitable sustainable strategies in a bottom-up perspective. The research activity is developed in different steps:

1. investigation and analysis of the existing bibliography on natural resources and construction of a summary scheme;
2. survey of databases and collection of existing data of natural resources in different territorial areas;
3. critical analysis of the methods used in the literature for the processing of the collected data (see the previous step);
4. identification of new methods for processing the collected data and application hypotheses.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Have passed at least one of the exams of the list:

Optimization, Mathematical Models for Decision Making, Laboratorio sulle Scelte, Econometria, Laboratorio di Econometria, Econometrics, Nonlinear Models and Financial Econometrics

and have passed at least one of the exams of the list:

Commodity Markets, International Trade of Commodities, Economics of Rural Development, Economia e Gestione dell'Azienda Agraria e Agroindustriale.

Advanced knowledge of Excel, knowledge of R or Matlab language and of territorial or primary sector issues.

TUTOR: Paola Ferretti e Bruna Zolin (estimated start date: July 2021)

NUMBER OF STUDENTS: 2

6. INEQUALITIES IN CHILDREN'S HUMAN CAPITAL DEVELOPMENT

PROJECT DESCRIPTION:

The research project aims at exploring how differences in human capital endowment, measured by birthweight, translate in later differences and inequalities in human capital development at early ages, with a particular focus on the role of parental investment and parents' distributional preferences. The research assistant will provide support with respect to a systematic literature review and analysis of appropriate survey questionnaires modules relevant to empirical analysis.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Excellent knowledge of the English language (in particular with regard to reading and comprehension)

TUTOR: Francesca Zantomio (estimated start date: July or September 2021)

NUMBER OF STUDENTS: 2

7. COVID-19 AND MENTAL HEALTH

PROJECT DESCRIPTION:

The COVID-19 pandemic and the resulting economic recession have negatively affected many people's mental health. Many people are distressed due to the immediate health impacts of the virus and the consequences of physical isolation. Many are afraid of infection, dying, and losing family members. Individuals have been physically distanced from loved ones and peers. Millions of people are facing economic turmoil having lost or being at risk of losing their income and livelihoods. Frequent misinformation and rumours about the virus and deep uncertainty about the future are common sources of distress.

This research project studies the impact of COVID-19 and related policies on the mental health of vulnerable groups of the population in different European countries, with a specific focus on older adults and people with pre-existing health conditions.

The research assistance activity will follow the following phases:

1. Collection and analysis of the existing bibliography on COVID-19 and mental health; elaboration of a summary scheme.
2. Survey of existing sources and collection of data on COVID-19 and mental health.
3. Critical analysis of the methods used in the literature for the processing of the collected data (see the previous step).
4. Identification of method(s) for processing the collected data and working hypotheses
5. Preparation of a final report on what has been learned. The final report may be used as a basis for master/magistrale degree thesis under the Tutor supervision.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Have passed the following exams:

1. An exam of Health Economics at the second degree level
2. At least one exam of Statistics or Econometrics at the first degree level

Have passed or be enrolled in at least one of the following exams at the second degree level: Statistics, Statistical Surveys Analysis, Econometrics, Advanced Econometrics

Knowledge of the English language

Advanced knowledge of Excel (including the use of filters, tables and graphs) and familiarity with R or Stata, or willingness to acquire the necessary knowledge

TUTOR: Enrica Croda (estimated start date: July – December 2021)

NUMBER OF STUDENTS: 1

8. GENDER DISCRIMINATION IN COMPETITION: EVIDENCE FROM A TV GAME SHOW

PROJECT DESCRIPTION:

The student will support a research project aiming to analyse evidence of information-based discrimination against women, in a famous Italian game show. The game shows represent a convenient setting where to study gender discrimination in competitive situations, since it's a relatively natural environment with well defined rules and clear monetary incentives.

The student will be asked to watch a series of episodes of a famous Italian TV game show, in order to build a precise a detailed database on its content, thus defining, among other things, the participants' gender and their choices along the game.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Optimal knowledge of Italian language and optimal knowledge of Excel. The candidate should be a very precise and diligent person when dealing with datasets.

TUTOR: Valeria Maggian (estimated start date: July - December 2021)

NUMBER OF STUDENTS: 1

9. MOSE BARRIER SYSTEM OPERATIONS AND THE DESIGN OF PORT INFRASTRUCTURE UNDER UNCERTAINTY

PROJECT DESCRIPTION:

The MOSE mobile barrier system represents the main measure aimed at protecting Venice from periodic flooding dictated by the tides. In addition to the costs incurred for its implementation, the system has, in addition to the costs directly associated with its use, costly implications for navigation and port activities. The object of our study is the evaluation of the economic convenience of the redesign of the port infrastructure in the light of this costly interference.

The research fellow will be asked to:

- collect and elaborate data for the definition of the costs for the port associated with the closure of the barriers,
- collect and elaborate data to define the costs associated with the redesign of the port infrastructure,
- collect and elaborate data relating to the trend of the tides and the water level. Specifically, its consistency with respect to certain stochastic processes that are assumed to illustrate the dynamics will be tested.
- carry out a review of the economic literature on the subject.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

The following background is essential: i) solid preparation, at master's degree level, in Microeconomics, Mathematical Analysis and Econometrics, ii) excellent knowledge of the English language (in particular with regard to reading and comprehension) and iii) synthesis and aptitude toward critical analysis, iv) familiarity with the use of i) softwares for algebraic calculus such as Matlab, Mathematica or Maple and ii) softwares for statistical-econometric analysis programs such as STATA, R +, E-Views or SPSS.

TUTOR: Luca Di Corato, Carlo Giupponi (estimated start date: October 2021)

NUMBER OF STUDENTS: 1

10. PORTFOLIO COMPETITION AND MARKET SELECTION WITH FINITE TIME HORIZON

PROJECT DESCRIPTION:

The aim of the project is to simulate the performance of a risky securities market in a context in which investors have finite horizon, heterogeneous risk preferences, and different probabilistic models for assessing future scenarios. The solution of the problem is known only in implicit form and requires the use of computational tools for the characterization of its properties. The research question is whether the selection process depends only on individual probabilistic models, as it happens in models with intertemporal consumption and infinite horizon, or also on risk preferences. The candidate will be asked to familiarize himself with the reference

literature (both with finite time horizon and with infinite time horizon) and to write the code that allows to solve the implicit problem and to visualize the results. The results of the internship can be used as a basis for a degree thesis.

PREFERENTIAL QUALIFICATIONS/SKILLS TO SPECIFY IN THE LETTER OF MOTIVATION:

Having passed an exam of Probability and/or Econometrics and Financial Economics and/or Microeconomics I and/or Macroeconomics II. Being familiar with Matlab or a similar programming language (if not familiar being willing to spend some time to learn the language)

TUTOR: Pietro Dindo (estimated start date: July 2021)

NUMBER OF STUDENTS: 1