



Ca' Foscari
University
of Venice

SiE

Ca' Foscari
**School for
International
Education**



Ca' Foscari Foundation Year

Program Structure and Course Contents

Program Overview

In order to pass Foundation Year and obtain the final certificate, students must successfully complete each of the three learning modules:

General Curriculum

(compulsory)

These are the three mandatory subjects for everyone.

- Modern and Contemporary Italian history
- Critical Thinking
- Academic skills for University preparation

Study Track

(students choose one track)

- A. Economics and Management Track
- B. Humanities Track
- C. Science and IT Track

Language module (students choose one module)

- A. International Option (English)
- B. Bridge Option (Italian)
- C. Native Speakers Option (personalised)

Language of instruction

The general curriculum courses are taught entirely in English, as are the study tracks in Economics and Management and Science and IT. Students wishing to take Humanities and Arts can choose to study in either English or Italian. If students are enrolling in the Humanities and Arts track taught in Italian, they must have a certified B1 level of Italian by the beginning of the program. Alternatively, they need to enrol in the Bridge B2 language module.

General Curriculum

The general curriculum is taken by all students and offers classes in modern Italian history, critical thinking and a workshop on academic skills for university preparation. All subjects are taught in English.

Modern and Contemporary Italian History

This course will provide an overview of the major cultural and political developments that have defined Italian modern and contemporary history in its European context (1789-1948).

The course is divided into 2 modules: during the first semester students will study the period following the French Revolution, to focus on the events leading up to the creation of the Italian independent State, and Italy's role in WWI. In the second semester the module on contemporary history will analyse the rise of Fascism in the 1920s, Italy during WWII, with special attention to the transition from Fascism to the Republic and the challenges faced by the post-war Italian state and Italian society. At the end of the course students will have gained a general knowledge of the key concepts and main periods in modern and contemporary European and Italian history.

Critical Thinking

The course will explore the foundations of critical thinking in order to provide awareness of our own beliefs about the world, where they come from and why we might have

them—with a focus on how power and politics shape the ways that we understand the world, and how critical thinking can serve as a resource to empower people. The more general outcome will be an improvement in the students' communication skills. The topics will help students acquire new skills and boost their abilities to reason, think and debate in a critical way. Students will be guided through several lessons in a process that will enable them to discuss rationally about their statements, arguments, beliefs and to provide evidence. The aim of the course is also to foster the development of critical thought regarding media contents, social and moral problems.

Academic skills

The workshop is designed to assist students so as to learn, understand and reinforce their academic skills. It will focus on academic essay writing, researching sources and verifying their reliability, as well as strengthening the students' study method through various activities and strategies.

Language module

Depending on the degree program they want to apply for at the end of the Foundation Year, students choose to take one of three language module options.

International Option (English)

This option is meant for students wishing to enrol in a degree program entirely taught in English. Students will study to achieve a C1 language level in English, while also attending a course in Elementary Italian which will help them becoming part of the student and local communities. By attending several language classes every week, students will consolidate their knowledge of grammar and new vocabulary. Besides, through participation in group activities, they will quickly gain more confidence in speaking a foreign language.

Bridge Options (Italian)

Students choosing the Bridge Options will take intensive Italian language lessons, alongside the English-taught classes of their study track and general curriculum. They will also be divided into smaller groups based on their language level, which will be assessed at the beginning of the program. It is suitable for students wishing to enrol in a degree programme in Italian at Ca' Foscari University at the end of the Foundation Year. The Bridge B1 option is for students from beginner A1 to pre-intermediate B1 level (no prior knowledge of Italian required). The Bridge B2 option is for students from elementary A2 to intermediate B2 level (an A1 entry level of Italian is required).

Native Speaker Option

This is a personalised option for students who can demonstrate to be both a native speaker of English, and have a C1 knowledge of Italian. Students in this category will take extra disciplinary courses in English and courses in formal speaking or writing in English or Italian, and will be required to write a short thesis in the language of their choice, which will be reviewed by the Teaching Committee for evaluation.

Study Track

Each student chooses a Study Track from one of the four options below. Students must attend and successfully complete each course within the Track.

Track A: Economics and Management

This set of courses is designed for students wishing to apply for a degree course in the fields of economics or management.

Mathematics

These are the fundamental topics covered in this course:

- Terms and forms of mathematical language: logical connectives; implication; quantifiers; definition; axiom; theorem.
- Natural and integer numbers. Rational and real numbers. Properties of powers. Logarithms and their properties. Algebraic expressions and polynomials. Percentages.
- Elements and sets. Subsets and operations between sets.
- Functions. Composite and inverse functions. Real functions of real variables: monotone; periodic; even; odd; Graph of a function. Transformations of function graphs. Linear, quadratic, exponential and logarithmic functions.
- Equations and inequalities: rational; irrational; with absolute value; exponential; logarithmic.
- Coordinate systems in the plane and in the space. Distance in the plane. Line, circumference, ellipse, hyperbole and parabola.
- Basics of Trigonometry

Fundamentals of Financial Literacy

This course introduces students to some of the main topics in economics by improving their knowledge of financial markets and their comprehension of the financial behaviour of individuals along the life-cycle. The course is divided into two modules.

The first module will cover the current and future value of money (interest, compounding interest and present value); prices, inflation and purchasing power of money inflation; the lifecycle model and risk attitudes; financial markets (price-return and risk-return relationships); diversification and portfolio choice; and finally biases in investors' choices.

The second module will focus on loans mortgages (both fixed and floating rate); investment products (bank saving accounts, stocks, bonds, mutual funds, Exchange Traded Funds, retirement accounts, life insurance policies); investors protection; pension systems: multi-pillar systems, defined benefit and defined contribution pension plans.

Business Management and Administration

This course is an exploration of some of the fundamental themes at the basis of business administration and contemporary management studies. In particular, the course aims at equipping students with concepts, definitions and tools that will be useful in their further management studies at the university. The course will cover topics such as the structure of business firms and organizations; the nature and content of management as a profession; strategy, marketing and innovation (the interfaces between firms and demand); financial performance measuring and reporting, and the relevance of accounting in this process.

Introduction to Law

This course gives students a basic knowledge of all important aspects of Law. Students will deepen their knowledge on topics that span from the phenomenology of legal systems in modern and contemporary Western experience, to national states structures and their constitutions. Course contents will also include fundamental rights and the legal regulations of relations between private subjects, as well as fundamental institutes of relations between individuals such as contracts, and obligations.

The impact of the European Union on national systems, from the point of view of public law and private law is also going to be discussed in class, together with notions on Civil law and common law.

Data Analysis

The course is expected to include hands-on sessions to give students the possibility to carry out data analyses assisted by the course instructor. See here below the two main areas of study of this course.

Coding tools for data management

- Definition of a research question and identification of the relevant variables to consider
- Introduction to a statistical software for data-analysis
- Data collection and organization of datasets
- Basic notions of coding: conditional expressions, loops
- Examples and applications

Applied statistics for data analysis

- Variable types: quantitative and qualitative variables
- Summary statistics and graphical data visualisations of the distribution of quantitative and qualitative variables
- Statistical tools and graphical data visualisations to describe the relationships among variables

Track B: Humanities

This set of courses is designed for students wishing to apply for a degree course in the fields of Humanities. This track can be taken either in English or in Italian (students are required to have a certified B1 Italian language level, or enrol in the Bridge B2 language module).

Italian literature

The course will offer a detailed overview of Italian Literature from 1300s up to today through both lectures and seminars. Lectures will guide students through major literary works (poetry, novel, essay, theatre), following the general timeline of cultural history in Italy – the Florentine “Trecento”, Humanism, Renaissance, Classicism, Baroque, Romanticism, Risorgimento, Verismo, Fascism and Futurism, Neorealism. Seminar classes will focus on reading and analyzing specific literary texts throughout the course in small groups or as a discussion based on homework assignments.

The objective of the course is to provide students with a general but solid knowledge of Italian literary tradition, focusing on those milestone works along the evolution of literary genres and forms (sonetto, novella, commedia dell'arte, libretto d'opera) that have allowed Italian culture and language to become appreciated internationally.

Art History

The course will focus on the development and the spread of the arts in Italy and Europe from the early Medieval period to the 19th century. Starting from the end of the Roman Empire and its legacy, the course will explore the main traits of each historical period of the arts produced and preserved in Italy and Europe (Greek and Roman, Byzantine, Medieval, Renaissance, Baroque, Rococo, Neoclassical, Contemporary Art).

Students will experience a combination of different teaching and learning techniques (frontal lectures; group discussion; group-work; guided tours) enabling them to describe and compare works of Italian architecture, painting and sculpture, and to learn how to set them in their historical context and within the development of the History of European and Italian Art. At the end of the course, students will be able to identify the main periods of Italian art history within their historical and cultural context and analyse the characteristics of prominent works of art.

Philosophy

This course is designed to enable students to read and analyse philosophical texts and topics. It will cover the development of Western philosophical thought throughout the ages, providing students with the key philosophical concepts and questions, as well as insights into the historical and theoretical context surrounding the development of the framework of Western philosophy, from its ancient origins (Plato, Aristotle, Saint Augustine) and through key-figures of the Middle Ages and early modern period (Saint Thomas, Descartes), up to modern day (from Kant to Hegel). Students will gain an understanding of the main schools of thought and their approaches (e.g. metaphysics, idealism, materialism, empiricism, etc.) and will become acquainted with a variety of philosophical issues (e.g. the mind-body problem, the nature of beauty and goodness, and the relation between human freedom and necessity) which are key to critical thinking and problem-solving skills.

Introduction to classics

Starting from the very first key question of "What is Classics?" and inquiring how this definition evolved over time, this course will provide an introduction to the history and literature of ancient Greece and Rome based on extracts from key texts of Greek tragedy and Latin love poetry, and by such authors as Homer and Virgil. Students will also be introduced to the use of classical myths as the first form of historical records, and will then follow the evolution of historiography from its oral beginnings to the more modern written forms. By addressing these texts in their cultural and historical context, students will gain a basic knowledge of Classical culture and society. The course will help students identify the Classical roots of European culture, and of Italian culture within it.

Track C: Science and IT Track

This set of courses is designed for students wishing to apply for a degree course in the fields of science, such as Environmental Sciences, Chemistry, Computer Science, and Engineering Physics, and will include topics such as mathematics, physics, chemistry and biology.

Computer Science

This course aims to give an overview of fundamentals and technologies at the base of computational systems. The main purpose of the course is to introduce students to computational thinking. The course is important and relevant for all students who want to deepen the most important basis of computer science and programming. The student will acquire fundamentals of how computers work, skills that allow him to face problems with an algorithmic mindset and with the mental and practical process that programmers use, and familiarity with the Python language.

Mathematics

These are the fundamental topics covered in this course:

- Terms and forms of mathematical language: logical connectives; implication; quantifiers; definition; axiom; theorem.
- Natural and integer numbers. Rational and real numbers. Properties of powers. Logarithms and their properties. Algebraic expressions and polynomials. Percentages.
- Elements and sets. Subsets and operations between sets.
- Functions. Composite and inverse functions. Real functions of real variables: monotone; periodic; even; odd; Graph of a function. Transformations of function graphs. Linear, quadratic, exponential and logarithmic functions.
- Equations and inequalities: rational; irrational; with absolute value; exponential; logarithmic.
- Coordinate systems in the plane and in the space. Distance in the plane. Line, circumference, ellipse, hyperbole and parabola.
- Basics of Trigonometry

Physics

These are the fundamental topics covered in this course:

- Definition of position, velocity, acceleration. Uniform linear motion. Linear motion at constant acceleration.
- Force. Newton's laws of motion. Mass and weight. Projectile motion. Pendulum motion.
- Work, energy, power. Energy conservation. Friction.
- Fluids. Pressure. Pascal's and Archimedes' principles.
- Temperature. Heat. Ideal gas law. Changes of phase. First law of thermodynamics. Second law of thermodynamics (outline).
- Sound. Propagation. Intensity. Echo, resonance, interference.
- Light. Propagation. Reflection. Refraction. Dispersion and colors. Speed, frequency and wavelength.
- Electric charge. Static electricity. Coulomb's law. Insulators and conductors.
- Magnetism. Magnets. Magnetic dipoles. Earth's magnetic field. Compass.
- Electric current. Electric battery. Ohm's law. Electric power. Electromagnetic induction.
- Radioactivity (outline). Atomic theory of matter (outline).

Chemistry

These are the fundamental topics covered in this course:

- Elements, compounds and atoms.
- The gas laws.
- Atomic mass.
- Mole.
- Basic rules of nomenclature.
- Stoichiometry.
- Subatomic particles and atomic structure.
- Periodic table.
- Chemical bonds, intermolecular forces.
- The properties of solutions.
- Thermodynamics.
- First principle, enthalpy, state functions, entropy.
- Second principle, free energy.
- Reaction kinetics and chemical equilibrium.
- Chemical reactions: acids and bases, redox reactions, electrochemistry.
- Alkanes alkenes, alkynes, aromatic compounds.
- Functional groups.
- Biomolecules: carbohydrates, aminoacids, polysaccharides, proteins, DNA.
- Cellular metabolism and photosynthesis.

Biology

These are the fundamental topics covered in this course:

- Definition of “life”. Life molecules and organic compounds. Biomolecules.
- The cell: shapes, dimensions, membrane and cytoplasm. Difference between animal and plant cell. The cytoskeleton. Transport mechanisms through the cell membrane: passive transport (simple, facilitated diffusion, osmosis). Active transport. Cell and energy: metabolism, ATP. Aggregation of cells and tissues formation. Cellular reproduction. The cell cycle. Mitosis. Meiosis.
- Genetics: Mendel’s experiments and his laws. Variations on Mendel’s laws, incomplete dominance, co-dominance.
- The evolution: evidences. Fixism and evolution. Lamark and Darwin. Modern evolutionary theory.