Ca' Foscari
University
of Venice
Department of Economics

Department of Economics – Ca' Foscari University of Venice
Campus San Giobbe – Cannaregio 873, 30121 Venice
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NOTICE
Call for interest for the participation in the third edition of the
Finance Week @ Stevens Institute of Technology
academic year 2023-24

The Department of Economics and Stevens Institute of Technology are partners in the framework of a dual degree programme. The two institutions intend to promote a Summer School for the academic year 2023-24 entitled **Finance Week @ Stevens Institute of Technology** at the Hoboken Campus of the American university. The Summer School will be held in English.

This notice aims at verifying the interest of students in taking part to the next edition of the Finance Week @ Stevens Institute of Technology.
If you are interested in participating in the Summer School, please stick to the instructions published below.

Programme description

The third edition of the Finance Week @ Stevens Institute of Technology offers the opportunity to attend an **intensive** long-week course (from Saturday to Saturday) on **finance** topics, enhanced by lab sessions and company visits. The Summer School is based at the Hoboken Campus (New Jersey, USA) of the Stevens Institute of Technology.
Themes for the 2024 edition of the Finance Week @ Stevens Institute of Technology include: **Bloomberg** edition; **Python** edition; **Generative AI Prompting Techniques** edition; **Data Visualization** edition. Students interested in participating in the Summer School may indicate their preference for one of the above-mentioned themes. The proposed topic of the Summer School will be announced at a later moment, and it will consider the preferences expressed by the students during the application process.

Duration of the programme

The educational activities of the Finance Week @ Stevens Institute of Technology are scheduled approximately between **late May and early July 2024**. The Summer School will be activated upon reaching the minimum number of participants required by the partner University, which is **8 participants**. There is no maximum number of participants.

Costs

Participation costs for the Finance Week @ Stevens Institute of Technology range approximately from $1650.00 to $1700.00 and include instructional services (registration fees) for the Summer School and residential costs (accommodation) at the Hoboken Campus. Costs will be entirely covered by the students, who will also pay for all out-of-pocket expenses, including inter-travel, transportation, meals and other ordinary and customary expenses.
For the 2023-24 edition of the Finance Week @ Stevens Institute of Technology no mobility scholarship or incentives to cover the instructional and residential costs are provided.

Requirements

The Summer School is reserved to students regularly enrolled for the academic year 2023-24 in the MA programme in **Economics and Finance** or **Economics, Finance, and Sustainability** at Ca' Foscari University of Venice. Students must also possess a B2 level of English language proficiency.

Application procedure

Students must fill in the Google **form** https://forms.gle/25AoatJhEn1dNai6A no later than **Monday, April 22nd, 2024 at 12:00 PM** (noon) in order to apply for the Summer School. The form must be filled in electronically in its entirety and does not require to be signed. Students should indicate their topic of interest among those listed under the *Program Description* section attached to this notice. Students will also be asked to attach a brief **motivational letter**.

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Application results

The Educational Programmes Office of the Department of Economics will review the applications and verify that the candidates who would like to take part in the programme meet the admission requirements listed under the *Requirements* section. Students will receive an e-mail informing them about the admission or exclusion from the programme.

Activation of the Summer School

The activation of the Finance Week @ Stevens Institute of Technology project **is not automatic**. It also depends on the number of applications received. The activation of the Summer School and the duration of the programme will be communicated starting from Monday, April 22nd, 2024. Students will also be informed of the proposed topic of the Finance Week @ Stevens Institute of Technology, the exact amount of participation costs, and payment methods. The activation of the programme is subject to the signature of a relevant MoU between the two Universities as well. In case of activation of Finance Week @ Stevens Institute of Technology, students shall be responsible, at their own expense, for applying for entry visas and buying any international insurance (health or other) required by the host University. The host University also has the right to request medical certificates of good health and/or financial certifications attesting the possession of sufficient maintenance funds to cover the agreed study period. It is recommended to keep all documentation justifying the costs incurred.

Credit recognition

Upon completion of the Summer School, students may request recognition of the Summer School programme in their study plan as a **3 ECTS credits** activity amongst extra credits. The title and scientific-disciplinary sector of the activity will be related to the theme of the programme carried out abroad.
Credit recognition is contingent upon the actual activation of the Summer School and will be regulated according to the provisions established by the Department's Academic Board.

Privacy statement

Any personal data provided by the candidate are processed in accordance with the provisions of the applicable national and community legislation (Legislative Decree 196/2003 and Regulation (EU) 2016/679) for the sole purposes of completing the selection procedure. For more details, please view the information annexed to this call. Providing personal data is compulsory for the purpose of assessing the requirements for the selection procedure.

Academic Coordinator

The academic Coordinator for the Finance Week @ Stevens Institute of Technology project is Professor **Stefano Colonnello**.

Further information

For further information, please contact the Educational Programme Office of the Department of Economics: didattica.economia@unive.it, 041 234 9177.

Venice, April 11th, 2024

Professor Stefano Colonnello
Academic Coordinator

Department of Economics – Ca' Foscari University of Venice
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PRIVACY STATEMENT pursuant to article 13 of Regulation (EU) 2016/679

Ca' Foscari University of Venice, within the scope of its institutional purposes and in fulfilment of the obligations under Art. 13 of Regulation (EU) 2016/679 ("Regulation"), provides you with information on the processing of personal data you have provided to the University for the purpose of completing the selection procedure in which you wish to participate.

1) DATA CONTROLLER
The Data Controller is Ca' Foscari University of Venice, with head offices in Dorsoduro no. 3246, 30123 Venice (VE), in the person of the Rector.

2) DATA PROTECTION OFFICER
The University has appointed a Data Protection Officer, who can be contacted by writing to the e-mail address dpo@unive.it or to the following address: Ca' Foscari University of Venice, Data Protection Officer, Dorsoduro 3246, 30123 Venice (VE), Italy.

3) CATEGORIES OF PERSONAL DATA, PURPOSE AND LEGAL BASIS OF DATA PROCESSING
The processing in question involves the provision of personal details, contact information and information on previous academic and professional experiences. Personal data is processed solely for the purpose of completing the selection procedure and undertaken in the manner and within the limits necessary to pursue this purpose.
The legal basis for this treatment is represented by Art. 6.1.e) of the Regulation ("performance of a task carried out in the public interest or in the exercise of official authority"). It is possible to object to the processing at any time, by contacting the Responsible for Personal Data Protection at the aboveindicated address. The University will refrain from further processing personal data, unless in case of legitimate ground.
The processing of personal data is based on the principles of fairness, lawfulness and transparency and on the protection of the privacy and rights of the party concerned, as well as the additional principles provided for by Art. 5 of the Regulation.

4) PROCESSING METHOD
Personal data shall be processed by authorised entities (in compliance with the provisions of Art.29 of the Regulation), including with the use of computerised procedures, adopting adequate technical and organisational measures to protect them from unauthorised or illegal access, destruction, loss of integrity and confidentiality, even accidental.

5) RETENTION PERIODS
Data shall be retained in compliance with the rules on the retention of administrative documentation.

6) RECIPIENTS AND CATEGORIES OF RECIPIENTS OF PERSONAL DATA
For the aforementioned purposes, in addition to specifically authorised employees and collaborators of the university, personal data may also be processed by persons outsourced by the Data Controller as external Data Processors.
This personal information may be communicated to the foreign university where you wish to spend your mobility period. No further disclosure to third parties is envisaged except to persons to whom the data must be transmitted in fulfilment of legal obligations or, on request, to judicial and control bodies. The results of any intermediate tests and the final rankings shall be published according to the legislation in force.

7) PROVISION OF DATA
The provision of such data is necessary to evaluate the participation requirements. Failure to provide such data may prevent such evaluation, leading to exclusion from the procedure.

8) RIGHTS OF DATA SUBJECTS AND PROCEDURES FOR THEIR EXERCISE
As data subject, you have the right to obtain from the university, in the circumstances provided for by the Regulation, access to personal data, rectification, completion and erasure of said data or the restriction of processing, or the right to object to the processing (Articles 15 et seq. of the Regulation).

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The request can be made, without any formalities, by contacting the Data Protection Officer directly at dpo@unive.it or by writing to the following address: Ca' Foscari University of Venice - Data Protection Officer, Dorsoduro 3246, 30123 Venice, Italy. Alternatively, you can contact the Data Controller by writing to the certified email address (PEC) protocollo@pec.unive.it. Data subjects who believe that the processing of personal data concerning them is undertaken in violation of the provisions of the Regulation also have the right to lodge a complaint with the Italian Data Protection Authority, as established by Art. 77 of the Regulation, or to an effective judicial remedy (Art. 79 of the Regulation).

"Finance Week" @ Stevens Institute of Technology"

Program Overview

Course Overview

Objective of this course is to provide students with formal training on the various data resources in the HFSL lab; most of these skills are learned on the job, students will be pre-loaded with these skills prior to entering the workplace. The course will grant the Bloomberg Market Concepts (BMC) Certification.

Learning Objectives

After taking this course, students will be able to:
- navigate through the Bloomberg terminal;
- use Bloomberg Excel API and perform simple data analysis on data set.
- Retrieve and analyze equity and fixed income securities.

Additional learning objectives include the development of:
- performing quality due diligence on potential investments;
- bridging technology and finance.

Pedagogy

The course will employ face-to-face lectures, in-class exercises, individual simulations and 4 team assignments to be completed outside the lab sessions. The assignments will be related to the material taught in the face-to-face lectures.

Teaching Material

The instructors will provide teaching notes, class slides and references.

Exams

The components of the final grade and their weights are as shown below:

1. Class Participation (Attendance Mandatory)	20%
2. Bloomberg BMC Certification (Individual exam)	40%
3. Team Assignments	40%
TOTAL	**100%**

Course Schedule

Date	Activity	Instructor(s)	Topic
Saturday h.16.00 – 20.00	Arrival in NYC		-) Accommodation at Stevens -) Campus visit
Sunday			-) Free Day -) Visit NYC
Monday h. 9.00 - 10.30	Lecture 1	TBD	-) Course Introduction -) The role of database in finance & investment banking -) HFSL Lab Overview -) BBG Logins
Monday h. 11.00 - 12.30	Lecture 2	TBD	-) Bloomberg Navigation (Fundamental Analysis) -) Launching Assignment # 1
Monday h. 14.00 - 16.30	Off Campus Visit 1	TBD	*-) NYSE (or NASDAQ) NY Stock Exchange* *-) Bloomberg Headquarters* *-) IEX*
Tuesday h. 9.00 - 10.30	Lecture 3	TBD	-) Bloomberg Navigation (Technical Analysis)
Tuesday h. 11.00 - 12.30	Lecture 4	TBD	-) Bloomberg Navigation (Historical Data Retrieval) -) Launching Assignment # 2
Tuesday h. 14.00 - 18.00	Tutorship	TBD	-) Team group (Assignment # 1 & 2) -) Tutorship
Wednesday h. 9.00 - 10.30	Lecture 5	TBD	-) Discussing Assignments # 1,2 -) Bloomberg Financial Tools (Excel API)
Wednesday h. 11.00 - 12.30	Lecture 6	TBD	-) Data Analysis: univariate/multivariate regressions -) Interpreting results of regression analysis

Wednesday h. 14.00 - 16.30	Off Campus Visit 2	TBD	*-) Goldman Sachs Trading Floor* *-) Federal Reserve of New York* *-) AQR*
Wednesday y h. 9.00 - 10.30	Lecture 7	TBD	-) Fixed income: Bond data retrieval
Thursday h. 11.00 - 12.30	Lecture 8	TBD	-) Fixed income: Yield analysis Launching Assignment # 3
Thursday h. 14.00 - 18.00	Tutorship	TBD	-) Team group (Assignment # 3) -) Tutorship
Friday h. 09.00 - 17.00	Exam	TBD	-) Individual Exam (BESS - Bloomberg Certification) -) Discussing Assignments # 3

"Finance Week" @ Stevens Institute of Technology"
Python Edition

Program Overview

Course Overview

Objective of this course is to provide students with no or limited experience on Python a formal introduction to the Python language and its applications to Finance. The course will cover the basis syntax rules, modules, importing packages (Numpy, Pandas), data visualization, and offer an optional extension to machine learning applications. The course is structured around 14 contact hours and about 10 hours of homework, assignment and final project development.

Prerequisites

Students are strongly encouraged to have some basic knowledge of programming. Familiarity with loops, conditional statements, variable and data structuring is preferred. If students have no prior knowledge, the machine learning optional extension will be replaced by an introduction to basic coding tools.

The course will employ face-to-face lectures, in-class exercises, individual and/or team assignments. The assignments will be related to the material taught in the face-to-face

Learning Objectives

After taking this course, students will be able to:
- Identify/characterize/define a problem
- Design a program to solve the problem
- Create executable code
- Read most Python code
- Write basic unit tests

Additional learning objectives include the extension to:
- Implementing simple machine learning routines.

Pedagogy

The course will employ face-to-face lectures, in-class exercises, individual and/or team assignments. The assignments will be related to the material taught in the face-to-face

lectures. The course closes with a simple final project.

Teaching Material

The instructors will provide teaching notes, class slides and references.

Course Schedule

Date	Activity	Instructor(s)	Topic
Saturday h.16.00 – 20.00	Arrival in NYC		Accommodation at Stevens Campus visit
Sunday			Free Day
Monday h. 9.00 - 1.15	Lectures 1-3	TBD	Installing Python and IPython Notebook Basic Python Language I Basic Python Language II
Monday h. 2.30 – 5.00	Tutorship	TBD	Individual or group assignment Tutorship
Tuesday h. 9.00 - 1.15	Lecture 4-6	TBD	Basic Python Language III Intro to useful standard library NumPy Basics
Tuesday h. 2.30 – 5.00	Off Campus Visit 1	TBD	TBD. Past visits listed below
Wednesday h. 9.00 - 1.15	Lecture 7-9	TBD	Getting Started with pandas Pandas II Plotting and Visualization
Wednesday h. 2.30 – 5.00	Tutorship	TBD	Individual or group assignment Tutorship
Thursday h. 9.00 - 1.15	Lecture 10-12	TBD	Time Series Financial and Economic Data Applications

Thursday h. 2.30 – 5.00	Tutorship	TBD	Individual or group assignment Tutorship
Friday h. 9.00 – 11.45	Lecture 12-14	TBD	Machine learning applications
Friday h. 12.00 – 1.15	Lecture 15	TBD	Presentations
Friday h. 2.30 – 5.00	Off Campus Visit 1	TBD	TBD. Past visits listed below

*List of past off-site visits:
- NASDAQ
- NYSE
- Chicago Mercantile Exchange
- IEX
- CFTC
- Goldman Sachs
- Bloomberg
- Federal reserve of New York
- UBS trading

"Finance Week" @ Stevens Institute of Technology"
Generative AI Prompting Techniques Edition

Program Overview

Course Overview

Objective of this course is to provide students with a toolset for designing and executing effective prompts for generative AI platforms such as Chat GPT Lllama and Bard. The course will discuss the key elements of designing an effective prompt, introduce to the design of prompts for common tasks such as question answering and information extraction and apply a taxonomy of popular prompting techniques such as role-playing, zero-shot, and few-shot learning.

The course is structured around 14 contact hours and about 10 hours of homework, assignment and final project development.

Prerequisites

Students are encouraged to have some basic knowledge of generative AI tools and basic programming but no prior knowledge of Large Language Models, Machine Learning or programming is required . The course will employ face-to-face lectures, in-class exercises, individual and/or team assignments. The assignments will be related to the material taught in the face-to-face

Learning Objectives

The course will provide multiple skills"

Advanced Prompting Techniques & LLM Reliability

Apply advanced prompting techniques like prompt chains, chain-of-thought, ReAct, and RAG to improve the performance of LLMs.
Improve model reliability, efficiency, and performance.
Learn cost-effective and efficient prompting tactics.

Evaluating LLMs & AI Safety

Discuss prompting techniques and approaches for assessing model safety, toxicity analysis, mitigating bias, reducing hallucination, and testing prompt injections.

Applying different approaches for evaluating LLMs for tasks such as text classification and summarization.
Evaluate and compare prompt engineering techniques with fine-tuned models.

Pedagogy

The course will employ face-to-face lectures, in-class exercises, individual and/or team assignments. In particular students will:
- Review the latest tools and best practices for prompt engineering to effectively build with language models
- Discuss end-to-end, real-world use cases and applications, such as combining knowledge with conversational bots and using LLM with external tools
- Discuss current papers, trends, recommendations, and future directions

The assignments will be related to the material taught in the face-to-face lectures. The course closes with a simple final project.

Teaching Material

The instructors will provide teaching notes, class slides and references.

Course Schedule

Date	Activity	Topic
Saturday h.16.00 – 20.00	Arrival in NYC	Accommodation at Stevens Campus visit
Sunday		Free Day
Monday h. 9.00 - 1.15	Lectures 1-3	• Introduction to LLMs and prompts, the elements of a prompt, general tips and tricks • Large language models, ChatGPT and GPT-4, LLaMa and Mistral 7B.
Monday h. 2.30 – 5.00	Tutorship	Individual or group assignment Tutorship
Tuesday h. 9.00 - 1.15	Lecture 4-6	• Zero-shot prompting, Few-shot prompting • Chain-of-thought prompting, Self-consistency • Multimodal chain-of-thought prompting, Active prompting

Tuesday h. 2.30 – 5.00	Off Campus Visit 1	TBD
Wednesday h. 9.00 - 1.15	Lecture 7-9	• Tree of thought prompting, Generated knowledge prompting • ReAct prompting, Retrieval augmented generation
Wednesday h. 2.30 – 5.00	Tutorship	Individual or group assignment Tutorship
Thursday h. 9.00 - 1.15	Lecture 10-12	• Automatic prompt engineer, Automatic reasoning and tool-use • Directional stimulus prompting, Graph prompting
Thursday h. 2.30 – 5.00	Tutorship	Individual or group assignment Tutorship
Friday h. 9.00 – 11.45	Lecture 12-14	• Risks of prompt engineering, Biases and factual errors • Applications (Generating code)
Friday h. 12.00 – 1.15	Lecture 15	Presentations
Friday h. 2.30 – 5.00	Off Campus Visit 1	TBD

*List of past off-site visits:
- IEX
- CFTC
- Goldman Sachs
- Bloomberg
- United Nations
- Federal reserve of New York
- UBS trading

"Finance Week" @ Stevens Institute of Technology"
Data Visualization Edition

Program Overview

Course Overview

Effective visualization of complex data allows for useful insights, more effective communication, and making decisions. This course investigates methods for visualizingfinancial datasets from a variety of perspectives in order to best identify the right tool for a given task. Students will use a number of tools to refine their data and create visualizations, including: R and associated visualization libraries, Ruby on Rails visualization tools, ManyEyes, Google Chart Tools, Google Refine, and image-editing program.

Prerequisites

Students are strongly encouraged to have some basic knowledge of programming. Familiarity with presentations, database management, variable and data structuring is preferred.

The course will employ face-to-face lectures, in-class exercises, individual and/or team assignments. The assignments will be related to the material taught in the face-to-face

Learning Objectives

After taking this course, students will be able to:

1. Develop knowledge of tools for visualizing datasets with emphasis on financial datasets.
2. Develop a programmatic understanding of translating data into useful visual forms
3. Develop a critical vocabulary to engage and discuss information visualization
4. Develop an understanding of data visualization theory.
5. Understanding of ethical considerations for data visualization

Pedagogy

The course will employ face-to-face lectures, in-class exercises, individual and/or team assignments. The assignments will be related to the material taught in the face-to-face lectures. The course closes with a simple final project.

Teaching Material

The instructors will provide teaching notes, class slides and references. Textbooks are recommended but not required:

1) Yau, Nathan. Visualize This: The Flowing Data Guide to Design, Visualization, and Statistics.Wiley Publishing, 2011. ISBN: 978-0470944882.
2) Tufte, Edward. The Visual Display of Quantitative Information. Cheshire, CT:Graphics Press, 2001. Print. ISBN: 978-0961392147

Course Schedule

Date	Activity	Instructor(s)	Topic
Saturday h.16.00 – 20.00	Arrival in NYC		Accommodation at Stevens Campus visit
Sunday			Free Day
Monday h. 9.00 - 1.15	Lectures 1-3	TBD	TBC Course introduction The data visualization process and the value of dataviz.
Monday h. 2.30 – 5.00	Tutorship	TBD	Individual or group assignment Tutorship
Tuesday h. 9.00 - 1.15	Lecture 4-6	TBD	TBC Developing a design
Tuesday h. 2.30 – 5.00	Off Campus Visit 1	TBD	TBD. Past visits listed below
Wednesday h. 9.00 - 1.15	Lecture 7-9	TBD	TBC Data Modelling
Wednesday h. 2.30 – 5.00	Tutorship	TBD	Individual or group assignment Tutorship

Thursday h. 9.00 - 1.15	Lecture 10-12	TBD	TBC Interactivity and Tools Overview; Data Visualization Collaboration
Thursday h. 2.30 – 5.00	Tutorship	TBD	Individual or group assignment Tutorship
Friday h. 9.00 – 1.15	Lecture 12-14	TBD	
Friday h. 2.30 – 5.00	Off Campus Visit 1	TBD	TBD. Past visits listed below

*List of past off-site visits:
- NASDAQ
- NYSE
- Chicago Mercantile Exchange
- IEX
- CFTC
- Goldman Sachs
- Bloomberg
- Federal reserve of New York
- UBS trading