

## **Summer 2025**

### **Summer High School Program**

#### **Young Business Creators**

This two-week course introduces high school students to the essentials of economics through real-world examples and practical applications. Students will understand basic economic principles such as scarcity, supply and demand, price setting, and opportunity cost, explore how economic principles influence their daily choices, personal finances, savings and budgeting. They will explore how businesses operate and respond to economic forces (revenue, costs, taxes). They will be able to discuss the role of governments and global systems in the economy (trade, globalization, inflation, unemployment). By the end of the course, students will have a foundational understanding of key economic concepts and how they apply to real-life situations

#### **Introduction to Biological Sciences**

This is a two-week program in the Biological Sciences with a focus on activities conducted in a biology research laboratory setting. The participants will familiarize themselves with methods and techniques used in various disciplines of life sciences, such as cell and molecular biology, anatomy and physiology, microbiology, ecology, epidemiology and evolution. Throughout the program, students will gain hands-on experience in: (1) laboratory techniques such as microscopy, spectrophotometry, electrophoresis, dissection and comparative anatomical examination of vertebrate species etc. (2) practices used during field work for defining ecosystem's biodiversity indexes, estimating the size, pattern of geographical distribution and kind of interactions in plant-communities and for estimating the levels of environmental pollution. (3) methods used for the investigation and surveillance of disease outbreaks in human population and for the analysis of relevant scientific evidence.

#### **Introduction to Biotechnology**

The course is designed to familiarize students (interested in the fields of medicine, veterinary medicine, pharmacology, biotechnology, biochemistry, molecular biology, food science and immunology) with the nature of work and activities conducted in a real biology/bio chemistry research laboratory setting. The course will offer two weeks of hands-on training on essential and current laboratory techniques used in microbiology, biochemistry and molecular biology. The microbiology part of the course will cover basic microbiology concepts and practices such as the isolation, cultivation, identification and classification of microorganisms. In the biochemistry/molecular biology part of the course, students will receive hands-on experience in DNA isolation and electrophoresis, protein isolation and enzyme assays. Throughout the two-week training camp, students will use equipment found in state of the art research laboratories and gain hands-on experience in laboratory techniques and practices such as micropipetting, centrifuging, spectroscopy and the basic recombinant DNA technology techniques. Students will also have the opportunity to visit biotechnology research laboratories and talk to scientists in the areas of genomics, bioinformatics and molecular biology and be inspired to pursue their interest in science. By the end of the program, participants will have gained a real-life experience (including rewards and challenges) working in a research laboratory in the field of biology/biochemistry. Finally, the course concludes with a consideration of bioethical issues related to biotechnology.

## **Web Development**

Do you want to know more about Web Development or start a career in this field? This seminar is open to anyone who wants to set up their online presence. Students will work with HTML, CSS, Javascript technologies. It is suitable for those who want to learn to build websites and have control of their content. The lessons consist of a very practical part, with hands-on examples and exercises to better understand new items. You will need to bring your own laptop with you so that you can better practice all the new concepts you will be trained, in class and at home. Upon completion of your training you will be given a certificate of attendance to add it to your CV and your LinkedIn profile.

## **Girl Empowerment**

This is a two-week program in the Social Sciences with a focus on the empowerment of young adolescent girls. What are the challenges and opportunities for young girls today? What are their main concerns? The focus will be on topics such as health and body image, active life, personal safety, choice of profession, community engagement. The camp is a practical setting that fosters empowerment, identity development and understanding. A number of daily workshops, group activities and role play aim to provide girls with resources, skills and competencies that will help them build self-respect, positive mindset and confidence and fulfill educational and personal aspirations. The participants will work on themes related to awareness about young women's concerns such as unrealistic beauty standards, peer pressure, online bullying, and gender inequality. The camp shall enhance their critical thinking skills and allow them to make informed decisions.

## **The Art and Craft of Mathematical Problem Solving**

What is a problem? At first glance, a question like this appears to be devoid of meaning. Besides, when we think of it, the majority of us have grown up having an intuitive familiarization with the word. From our early years, we have become aware of the existence of problems in almost every aspect of our everyday lives. We have been tasked, many a time, with offering solutions to problems (successfully or unsuccessfully). To make a long story short, we feel we know very well what a problem is. It is, therefore, extremely impressive how a simple question like the one above can cause a puzzling numbness of the tongue! One of the most accurate definitions of a problem I have ever met is the following:

A problem is a non-trivial difference  $\Delta$  between what is and what should be.

In other words, a problem exists precisely whenever we meet a non-directly reconcilable difference between what something is and what it is expected to be. We immediately see that this definition is powerful enough to distinguish an exercise from a problem: An exercise is a question with a known, fixed trail of action. In direct contrast, a problem has no prescribed solution. Here, the solution is something one needs to really fight for. The road towards discovering it is often filled with dead-ends, changes of heart, long periods of stagnancy and unguaranteed success. And yet, ultimately, it is overcoming fundamental problems in life that paves the way for progress; in many areas of life. Not just mathematics! This is why problem solving constitutes, besides a social necessity, a form of art that requires years of practice to learn; and never less than a lifetime to perfect.

This course will immerse the participants into the art and craft of Problem Solving by

working with them through a plethora of problems from all areas of pre-university mathematics and by presenting not only their solutions, but also the thinking trails one could follow to reach them. There is a huge difference between the two approaches and the tutor strongly feels that the second proves to be a lot more didactic than the first one. Hopefully, by the end of this 2-week course, participants will be able to observe that a set of ideas to be presented tend to appear again and again; and that, if used on a regular basis, these will evidently hone their skills on problem solving.

### **Photography**

Dive into a world of creativity and exploration in our Summer Photography Course Tailored specifically for budding young artists. This course blends theory with hands-on experiences to cultivate a comprehensive foundation in the art and techniques of photography. From capturing the wonders beneath the surface through underwater photography to experimenting with storytelling through video capturing and immersive 360° imagery, this course is a thrilling blend of fun and education.

This course is designed to nurture your creative vision, enhance technical skills, and foster critical thinking through engaging activities. Immerse yourself in a dynamic learning environment featuring lectures, demonstrations, peer critiques, lab work, and exciting field trips where you learn by doing! This course goes beyond technical skills. Embrace experimentation and self-expression as you undertake regular assignments and projects. Apply theoretical concepts and technical skills to craft visually captivating and conceptually meaningful photographs.

This summer photography course is your gateway to discovering the artistry and technical finesse behind captivating images. Unleash your creativity, connect with like-minded peers, and build a solid foundation for your journey into the captivating world of photography.

To fully benefit from this Photography Summer Camp, participants are required to have access to one of the following types of cameras:

1. DSLR (Digital Single-Lens Reflex) camera

Any DSLR camera with manual settings capabilities would be ideal.

2. Mirrorless camera

A mirrorless camera equipped with manual settings for aperture, shutter speed, and ISO.

3. Compact camera with manual settings

A compact camera that offers manual control over settings such as aperture, shutter speed, and ISO.

4. Modern mobile phone camera

A smartphone with a built-in camera that is relatively recent, having been manufactured within the last 5-6 years.

### **Share the News Like a Pro**

Essentials of Journalism for High School students who would like to manage effectively the huge flow of information they receive and share within different networks. Participants will be engaged in the actual process of evaluating, sharing and producing content online; they will familiarize themselves with tools and techniques that will help them to prioritize information; they will learn to tell meaningful stories in gripping but ethical ways, and will develop basic interviewing skills. Through hands-on activities and real stories, students will develop skills that are useful for their school life and beyond.

### **Financial Literacy**

Introductory course in Economics that covers critical concepts that everyone should be aware of regardless of their specialization.

The course takes students from the basics of thinking like an economist (Basic Demand and Supply, Opportunity Costs, Marginal Analysis), to the key macroeconomic variables (GDP, Unemployment and Inflation), to concepts like the behavior of Consumption and Savings, and to Fiscal and Monetary policies. Furthermore, students will be presented with some basic knowledge concerning the decision-making tools behind investments, loans and pension plans. Finally, a core topic will cover the basics of Economic Crises, their causes, consequences and remedies, throughout time, with the 1929 and 2008 crises being the focal point.

### **Marketing Bootcamp: Secrets of Branding**

The Marketing Bootcamp is an exciting, hands-on program designed to inspire and empower young, aspiring marketers. Packed with creativity and real-world experiences, this program helps students develop the skills needed to create strong, impactful brands. Through engaging activities, strategic insights, and collaborative challenges, participants will dive into the world of branding, learning what makes a brand not only memorable but also successful.

Students will learn how to create compelling brand identities, build consumer trust, and develop marketing campaigns that stand out. They'll get the chance to learn from industry experts and collaborate with peers in a supportive, energetic environment. From group projects to market research, brand positioning, and campaign design, participants will gain the practical experience needed to succeed in the competitive marketing world.

By the end of the bootcamp, students will have the tools to design their own brand strategies and marketing plans, ready to take on the fast-paced, ever-evolving world of branding with confidence and creativity. Whether they aim to launch their own personal brand or pursue a career in marketing, this bootcamp provides the perfect foundation to help them succeed.

### **Real Life Economics**

This two-week course introduces high school students to the essentials of economics through real-world examples and practical applications. Students will understand basic economic principles such as scarcity, supply and demand, price setting, and opportunity cost, explore how economic principles influence their daily choices, personal finances, savings and budgeting. They will explore how businesses operate and respond to economic forces (revenue, costs, taxes). They will be able to discuss the role of governments and global systems in the economy (trade, globalization, inflation, unemployment). By the end of the course, students will have a foundational understanding of key economic concepts and how they apply to real-life situations.

### **The ABC of Management – People and Organizations**

This evolving short educational experience aims to build a generic managerial background related to people and organizational performance through the formation and primary development of students' business acumen and mindset capabilities. The students will

delve into the significant role of managerial performance through the use of conceptual and practical approaches pertaining to leadership, strategic thinking, human resources, organizational change, organizational behavior, and quality management