



# GET INSPIRED

AND JOIN THE MOST INNOVATIVE  
SUMMER PROGRAM IN EUROPE!

---

**Algebra International Summer School 2020  
Zagreb & Island of Krk, Croatia**



**ALGEBRA**  
INTERNATIONAL  
SCHOOL

# ABOUT ALGEBRA UNIVERSITY COLLEGE

Your time spent in higher education should not be just an intermezzo, a short break between the innocence of school life and the harsh future that awaits you. Education is always an opportunity and a step forward and that is why it should be taken seriously. We are here to help you along this road and that is why Algebra University College opened its doors to you. Because of you. You are the reason why we work hard every day to improve and perfect our programs. You are the reason why we never compromise on quality. We want you to discover the best version of yourself during your time at Algebra University College, regardless of taking a bachelor or master program, or just a short summer or winter course. We want you to find an area you will be passionate about and become really good at it.

Of course we take pride in all the awards received during the years. We are glad when others recognize our efforts. But our number one concern is justifying the trust you put in us.

We chose our lecturers very carefully. They will be your guides on the journey toward graduation. Their mission is to give you useful, up-to-date and applicable knowledge of their respective areas. To make you a true expert with real career prospects. Each course is envisioned as a small but significant step toward that goal. Their passion will rub onto you if you let it.

“Join us and let’s create digital future together!”

Algebra

## DID YOU KNOW?

Algebra is the biggest private education provider in Croatia! Algebra University College is ranked 1<sup>st</sup> in Republic of Croatia in respect to overall quality of the programs and institution according to the National Agency for Science and Higher Education for Quality Assurance System and is the best education organization in the world among 3,200 organizations as evaluated by Microsoft in 2014.

Experience Algebra University College through our International Summer School and find out why we are ranked the best education organization!



## OUR STUDY PROGRAMS

Students can choose between 12 study programs/specializations on bachelor and master level at our institution. All our master level programs are organized exclusively in English, even for Croatian students, so exchange and international students can join any program or course.

### Undergraduate Professional Study Program (Bachelor)

- Software Engineering
- System Engineering
- Multimedia Computing
- Digital Marketing
- Visual Communications Design

### Specialist Graduate Professional Study Program (Master)

- Software Engineering
- System Engineering
- Data Science
- Game Development
- Digital Marketing
- Design and Communications Management
- e-Leadership MBA

Learn more at [www.algebra.university](http://www.algebra.university)



# WHY JOIN THE INTERNATIONAL SUMMER SCHOOL PROGRAM?

**W**ould you describe yourself as creative, curious and open minded?  
If your answer is yes, to any of the 3 epithets, Algebra's International Summer School is the right choice for you!

Summer is an excellent time to get inspired and learn new and interesting things. Algebra University College offers you many different courses, so that you can spend your summer gaining new knowledge and skills. Young people around the globe already confirmed the quality of our professional curriculum and collected a lot of wonderful memories through studying, spending time together and exploring Croatia. The program is organized in a way to offer our students an excellent mix of work & play. Our courses are designed to be both applicable, creative and suitable for students from all backgrounds so don't get discouraged if you are just introducing yourself to the world of digitalization, we have something for everyone!

The best way to spend your summer has to be traveling and discovering new places, and there is no better place to do that than Croatia! Did you know that Croatia has more than 1000 islands and more than 2700 hours of sunshine a year? And you get to experience that and much more for 3 weeks! You will have a chance to spend 2 weeks in Zagreb and one week on island Krk while Croatia is at its liveliest season.

Now that you know all the necessary steps to an unforgettable summer, it's time to pack your bags and head to Croatia! You have until April 30th to apply for Algebra's International Summer School. The best summer of your life is right on your doorstep, don't miss it!

There is no better place to meet likeminded individuals from all over the world than Algebra's International Summer School. Make friends for life and join dozens of young people in creating digital future! Join us in Zagreb and Krk from July 5 - July 25 and see why we are the most exciting summer school in Europe.

**#Excel at what you love doing!**

Algebra International Crew

# CHOOSE YOUR SUMMER COURSE

EARN 6 ECTS PER COURSE

**ARTIFICIAL INTELLIGENCE**  
THE BENEFITS AND THE  
RISKS OF ARTIFICIAL  
INTELLIGENCE

**BRANDING**  
CREATING PERSONALIZED  
VISUAL IDENTITY FOR A  
BRAND

**CYBER SECURITY**  
THE FORC3 IS STRONG  
WITH THIS ONE

**DATA DRIVEN  
STORYTELLING**  
HOW TO CREATE AND TELL  
A STORY USING BIG DATA

**DIGITAL SCULPTING  
FUNDAMENTALS** LEARN THE  
BASICS OF SCULPTING IN  
ZBRUSH

**MOBILE APPLICATION  
DEVELOPMENT**  
FROM IDEA TO CREATION



## ADDITIONAL FREE WORKSHOP CROATIAN LANGUAGE & CULTURE

The Croatian Language and Culture workshop will help you learn the very basics of Croatian and offer an excellent insight into the Croatian culture. You will learn to read and write some of the most important Croatian words, as well as learn key conversational phrases. You will also learn tidbits about famous Croatians and Croatian history, geography, cuisine and more! Don't let Croatian catch you by surprise. Expect the unexpected!



# ARTIFICIAL INTELLIGENCE

## THE BENEFITS AND THE RISKS OF ARTIFICIAL INTELLIGENCE

**Artificial intelligence has been a fascinating concept for society in the past decade, and we are finally getting close to making AI a reality. Generally, we are witnessing significant improvement of various technologies all related to AI influence which drives demand for understanding not only how to use and implement such technologies but to understand the basic concepts of how selected components really work.**

In order to fully understand how AI will impact the future of work, this program seeks to explore the core features of AI technologies from a business and user perspective. You will understand why AI's social aspect is important and how complex it is to create efficient one. Be prepared to use your innovation skills and to advance it to next practical level. Once you get a grasp on the key AI components, complexity and enabling components, we will start a discussion how to successfully invoke AI in our life. Prototyping process will begin with a simple question: Can you create simple but efficient AI solution scenario by covering „all important“ aspects? Selecting appropriate or at least most adoptable technology model can be crucial for success. Play with solutions

using prepared scenarios and create your own with specific target customer/industry in mind. Once you master experimenting, you will push your imagination to its limits and create your story, share it and improve your AI skills in a group. Finally, you will be able to use this skill to learn how to quickly and efficiently navigate through business. Wrapping up, we are ready to take a look in the future. What can happen in a year or so? How will these cases evolve and how fast will our current skills become obsolete? Teamwork and individual pitches will be presented for mentor and participants evaluation. Exciting times are ahead, let this course reveal the benefits and the risks of AI and invoke the skills you will need in the future.





# BRANDING

## CREATING PERSONALIZED VISUAL IDENTITY

“ A brand is the set of expectations, memories, stories and relationships that, taken together, account for a consumer’s decision to choose one product or service over another. If the consumer (whether it’s a business, a buyer, a voter or a donor) doesn’t pay a premium, make a selection or spread the word, then no brand value exists for that consumer. ”

Seth Godin

Visual identity and branding are two terms that are often used to describe the process of creating a brand for your business or oneself. However, the two terms have different meanings. A visual identity provides the visual aspect of branding that businesses create in order to evoke certain feelings and experiences linked with the brand. A brand is much more than just the visual identity, but at times its understanding starts there.

This course will cover current generalization of visual identities that we are faced with within the field of visual communications. By covering the common mistakes, all efforts will be within the area of creativity and thinking outside merely the visual appeal or form itself. It will furthermore try to fully avoid such choices when creating a visual identity for a brand whether it is a company or a personal brand. Design and marketing wise the focus will be on true values that will be transformed into a visual

identity. The end result will be a concise and well thought of solution to a specific niche a student has in plan or suggests during the course.

You will learn to understand the brand and values, as well as deduce the elements for implementation in the visual form of communication. Apart from that, you will be able to research and synthesize the common mistakes and propose alternative ways of creation bringing value to a brand. And that’s not all. You will be able to create and define elaborated guidelines and sketches for proposed visual identity, recreate, construct and evaluate the proposed visual identity bearing in mind the given and received side of visual communication and brand values. And last but not least, you will learn to simulate solutions of visual identity according with the media scope and brand activities, create and present the final project pitch and accompanied materials.



# CYBER SECURITY

**THE FORCE IS STRONG WITH THIS ONE**

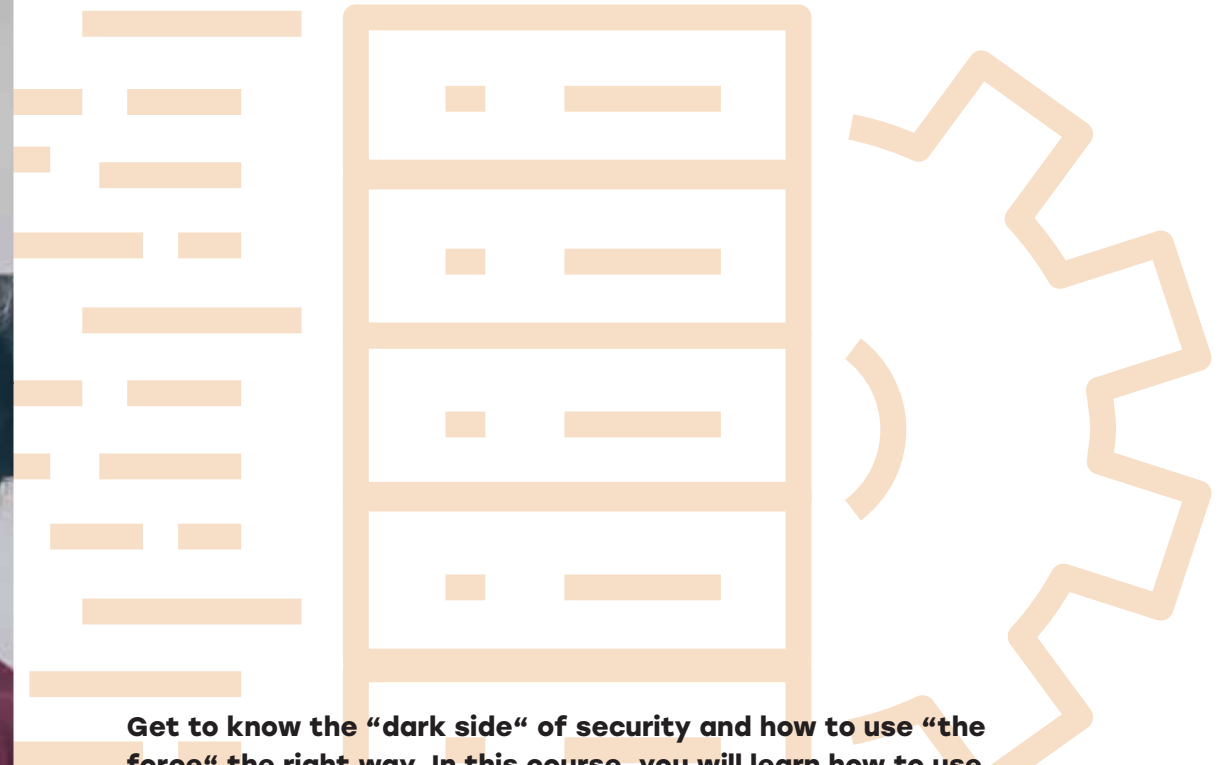
**Get to know the “dark side“ of security and how to use “the force“ the right way. In this course, you will learn how to use the computer without exposing it to most of the threats lurking outside, whether this is simple Internet browsing, “innocent“ usage of publicly available Wi-Fi or usage of “secure“ corporate network.**

**C**yber security is an ever-evolving field with opportunities waiting for everyone with the interest to learn more and develop their skills in this interesting and demanding topic. This course will show the basic steps most of the hackers would go through while compromising the victim’s computers and it will define some interesting known and less known attack vectors and protections against them.

You will not only have a chance to compromise many vulnerable machines by using different attack vectors, you will also gain knowledge that will help you protect

the computers and networks against the attacks covered in this course. The course will also cover some of the latest attacks and methods used in the wild.

The prerequisite for this course is the understanding of the basics of operating systems, network and web applications. Nevertheless, the important concepts will be delivered during the class as a refresher. Everyone brave enough to step into this class will be rewarded with the knowledge that is heavily sought after not only in military/government sector, but also in any security-aware corporation/ company.







# DATA DRIVEN STORYTELLING

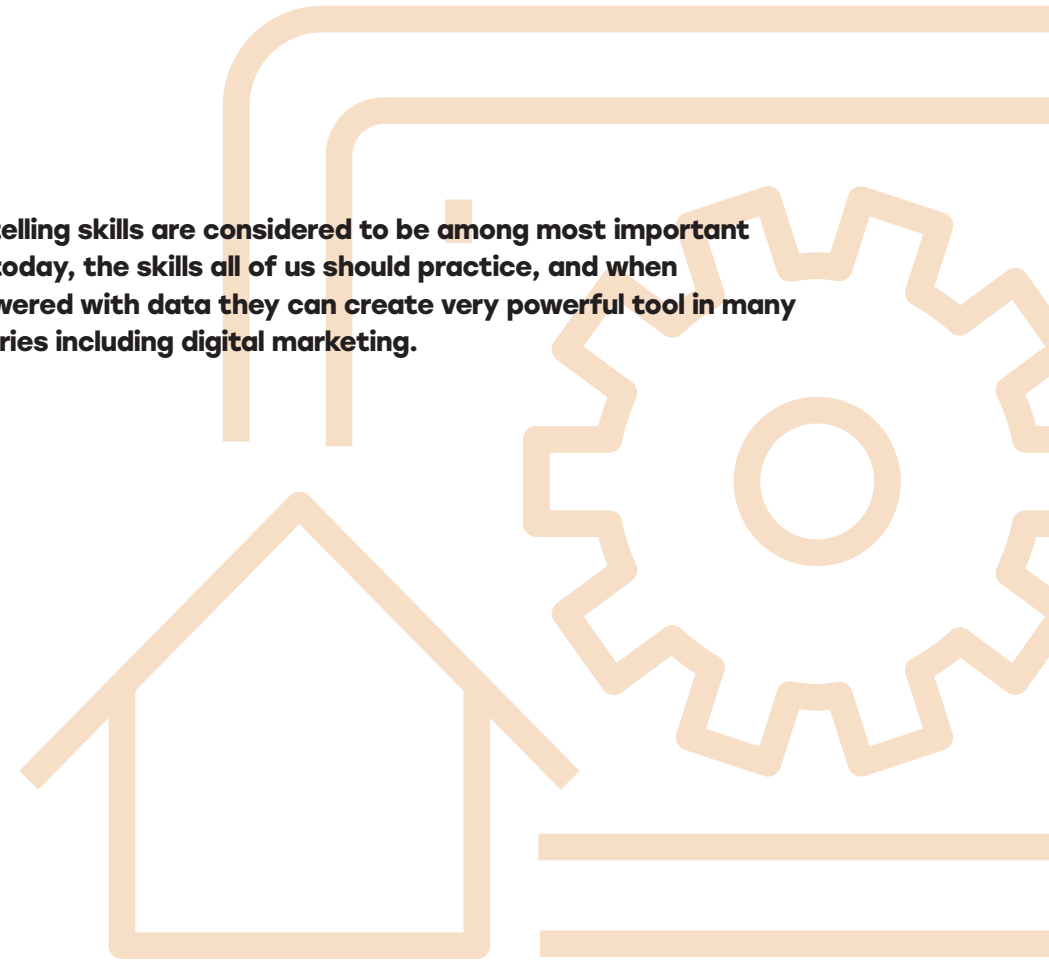
**HOW TO CREATE AND TELL A  
STORY USING BIG DATA**

**Storytelling skills are considered to be among most important skills today, the skills all of us should practice, and when empowered with data they can create very powerful tool in many industries including digital marketing.**

Our society is based on “stories” that are the basis for the way we communicate, live and dream. In the introduction to the lecture, a short section of technology development will be elaborated with a special focus on EDU / government / business (learning by doing) and data science, as well as advanced visualization. We will describe and conduct a characteristic data science project and show some techniques related to the big data infrastructure, and the way we use mathematical rules for various activities in the phases of these projects. In the lecture, through a practical view, we plan to show how to use data and advanced visualization

tools combined with large data sets to gain content and the way we can tell the story with the help of this content.

The course aims to introduce you to think out of the box and create interesting and, more important, relevant stories using data. In order to do that you will master different techniques of visualization and exploratory data analysis. You will acquire a necessary theoretical and practical knowledge and skills in the field of data science that is characterized by large volumes of data. Apart from the technique, you will be introduced to a variety of tools for visualization and exploratory data analysis.





# DIGITAL SCULPTING FUNDAMENTALS

LEARN THE BASICS OF  
SCULPTING IN ZBrush

**Digital Sculpting with Pixologic ZBrush has become the Industry standard for creating state of the art visuals for film, television and games alike. More than that it is the go-to software for any kind of sculptural and elaborate objects for purposes of 3D printing, rapid prototyping, prop and mask making for film and many other uses. The software provides unparalleled freedom to create rich and highly detailed digital models and sculptures in numerous art styles and expressions. Sculpting is done using a pressure sensitive tablet and is very akin to traditional sculpting and drawing and all of the traditional art techniques are incredibly useful and relevant.**

In this course, you will become familiarized with the ZBrush user interface and the most commonly used sculpting tools and practices. The course will be focused on using few very powerful sculpting tools and techniques in ZBrush which make for a straightforward sculpting style and provide fantastic foundations for any future artistic projects. You will be taken through the complete process of organic sculpting using various photo references. The course will explain the importance of silhouette, primary, secondary and tertiary forms. You will explore different methods of object and form creation and manipulation and learn different techniques of sculpting. The course will focus on the understanding of sculptural form through several different subjects each focusing on a different problem. You will be introduced to the ZBrush workflow and the possibilities of

developing or incorporating ZBrush into the art practices. This approach enables you to develop the understanding, knowledge, and skills and improve on a step by step, subject by subject basis. The course will teach you to recognize and interpret the character and flow of shapes through subject matter analysis. You will explore how to express their interpretations of subject matter and achieve accurate, high fidelity sculpts (relative to their artistic background). Through the course, you will create several character/creature busts through which they will explore and learn the usage of various tools and sculpting methods. The entire course will be as personalized as possible where the level of the sculpting problem will be suited to the individual student. One of each student's sculptures will be elaborated on creating a high-fidelity sculpt which will show to demonstrate your abilities.





# MOBILE APPLICATION DEVELOPMENT

FROM IDEA  
TO CREATION

The use of mobile technology is an opportunity to expand customer relationships. Your cellphone is always on, always at hand and knows where you are. Mobile phones are a useful tool that adds value. The industry of mobile applications definitely has a prosperous future.

The course is focused on preparing you for independent work and further learning. After successful completion of the course, you will be able to implement applications that use dialogs, menus, user preferences, background services, SQLite database, google maps and location services, web services, phone and SMS features.

Android application development course is performed in Java programming language and is carried out in Android Studio integrated development environment using Android emulator. Hence, its requirement is basic knowledge of programming and

Object-oriented paradigm (Encapsulation, Inheritance, Polymorphism, Abstraction), but it is not restricted to Java programming language.

The course starts with the presentation of the Android architecture through Android Software Stack, basics of Android Operating System and a Virtual machine used in the emulator. Further, it is concentrated on basic components to implement scalable Android applications (Activity, Service, BroadCast Receiver, Content Provider and Intent). All the building blocks are covered in great detail with many examples and variations in layout presentations.

# QUICK FACTS APPLICATION

The Summer School application process is carried out online at the official program website: [www.summer.algebra.university](http://www.summer.algebra.university)

Applications are reviewed on a rolling basis, once you submit your application the admissions team will contact you to schedule an online interview.

Applications must be submitted before April 30, 2020.

**We work in small groups and places are limited, so make sure to apply on time.**

## STUDENTS PROFILE

Highly enthusiastic and motivated students interested in the field of technology, applied science, social sciences and humanities as well as arts students who aspire to personal growth and effective start of their career.

## LANGUAGE OF DELIVERY

English.

The Summer School Program is intended for students with at least a pre-intermediate level of English and is not suitable for beginners or students with elementary level of English.



## APPLY FOR SCHOLARSHIP

Check out all of the scholarship opportunities at [www.summer.algebra.university](http://www.summer.algebra.university)

If you need any additional information, send us an e-mail to

[summerschool@algebra.university](mailto:summerschool@algebra.university)

## DATES

# July 5 – July 25, 2020

## TUITION FEES

	One course
Full Tuition Fee	1600 €
Early bird Tuition Fee*	1360 €

\*for the students enrolling before February 28, 2020

STUDENTS WILL BE AWARDED 6 ECTS/3 US CREDITS PER COURSE.

- Ask for information about special prices for groups and partner universities.

## THE TUITION FEE ALSO INCLUDES:



### CULTURAL & SOCIAL PROGRAM:

quirky museums, historical sightseeing, boat trip to remote islands



### ADDITIONAL FREE WORKSHOP

Croatian language and culture



Morning refreshment (tea or coffee)



**CROATIAN CUISINE:** lunch during week days





## ACCOMMODATION

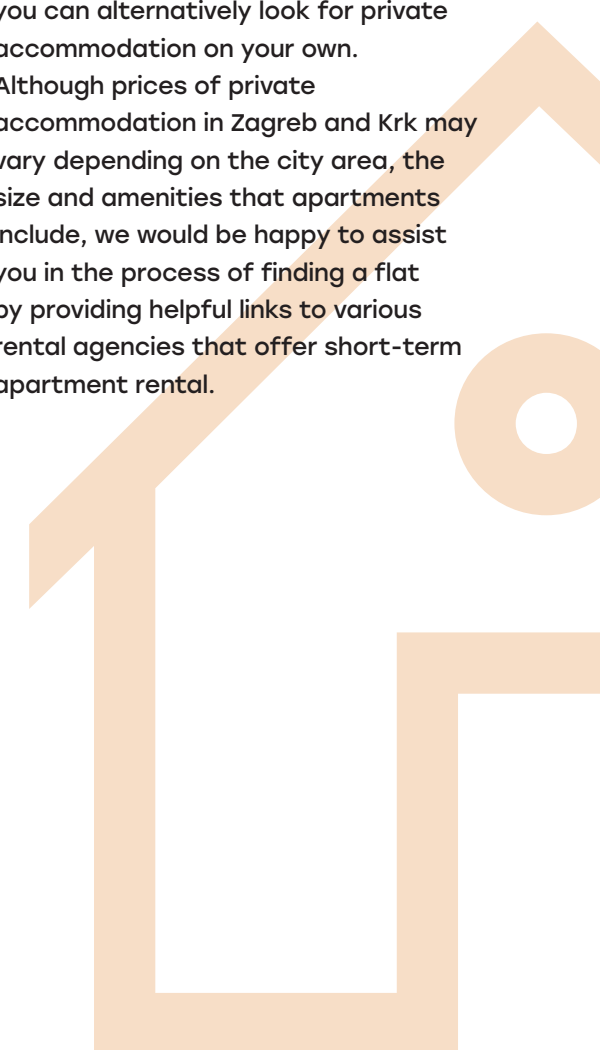
**Recommended  
price = 600 €**

**We recommend you book  
your accommodation before  
April 30, 2020.**



**A**ccommodation is NOT INCLUDED in the tuition fee. The price for accommodation during a three week Summer School course is approximately 600 EUR if you stay at hostels in Zagreb and Krk in multiple bed dorms. All spaces facilitate the student life to the fullest and allow students to have a unique experience. Most hostels are modern & urban designed, located in the heart of Zagreb and Krk.

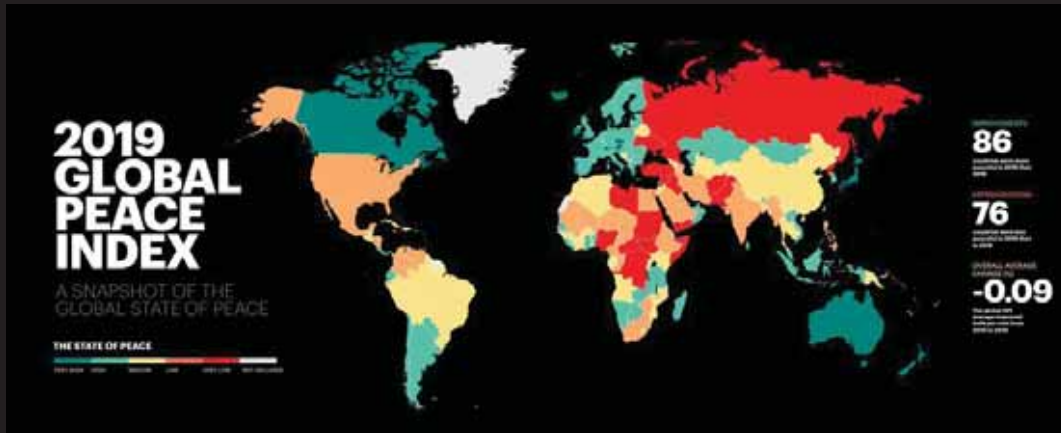
If you do not wish to stay in the hostel, you can alternatively look for private accommodation on your own. Although prices of private accommodation in Zagreb and Krk may vary depending on the city area, the size and amenities that apartments include, we would be happy to assist you in the process of finding a flat by providing helpful links to various rental agencies that offer short-term apartment rental.



# CROATIA

## YOUR “LIVE AND LEARN” DESTINATION

Croatia is **considered one of the safest countries in the world** according to The Global Peace Index 2019 produced by Institute for Economics and Peace (IEP), ranked 28 among 163 countries.



Croatia is one of the sunniest spots in Europe. You should expect 13 hours of sunshine a day in July. More than 19 million people choose Croatia for their holidays.

Even though Croatia is widely known for its beautiful coast, sunny islands and great football, it is also a land of innovators and home to inventions which have transformed human existence, several of which are used in everyday life like: tie, ball-point pen (Penkala pen), alternating electrical current, electrical transformers, power lines, parachute and many others. Croatia is also the birthplace of Marko Polo, Nikola Tesla, and many more outstanding individuals.



### Croatia - a small country of World's Greatest Technological Innovators

Aside from the beautiful coast and great cultural and historical heritage, Croatia has been recognized for innovation, global reference projects, export of the best business-technological practices, as well as great professionals recognized for their skills and expertise all over the world.







## City of Zagreb



Zagreb, one of the oldest European cities, is not only administrative but also the economic, diplomatic and cultural capital of Croatia, with a population of almost one million.

It is also a **university center** with forty higher education schools and over 85,000 students, a city that is proud of its long history of education: the first secular city school was built in the middle of the 14<sup>th</sup> century, the first secondary school was founded at the beginning of the 16<sup>th</sup> century and in the second half of the 16<sup>th</sup> century, Zagreb had its first university.

As the capital of Croatia, Zagreb is a great place to be all year round, however in summer the city is at its liveliest! There is an abundance of green areas such as park Maksimir, Bundek or Jarun where you can spend your free time sunbathing, having a picnic, barbecue or doing outdoor sports. Also, Zagreb offers plenty of cultural and open-air events organized daily during the summer. With approximately fifty museums, and events such as open air cinema, outdoor

stand-up comedy, rooftop parties and much more, in summer Zagreb becomes a paradise of everyone's liking!

Even though Zagreb is a Central European city, in many ways, it has a Mediterranean way of life.

**Great atmosphere and friendly local people are the biggest values of Zagreb.**

### DID YOU KNOW?

**Zagreb – the best Christmas Market in Europe in 2016, 2017 and 2018!**

The sound of Christmas bells, the scent of gingerbread, mulled wine and various other delicacies... Join the awarded best Christmas Market in Europe – the Advent in Zagreb. Zagreb offers a variety of events that will satisfy even the most demanding visitors.

There is plenty of fun, excellent food, unique events, art, but also a genuine Christmas atmosphere, on the streets of Croatia's capital.





## The City of Krk

**T**he history of island Krk reaches back into the prehistorical period. Numerous nations, indigenous inhabitants and strangers shaped its history, starting with the Liburni, the Romans, the Slavs, the Franks, the Venetians, the Habsburgs, all until the modern age. The city was founded on ancient foundations (Platea Antiqua, Thermae, mosaic in the tavern Mate, Temple of Venus and the city walls), which through hundreds of years of changes obtained a cover of medieval walls and a new city infrastructure still extending along the regular Roman city raster (cado and decumanus). The change in the city view was determined by two main features; one purely stylistic, brought by changes in the way of building, which followed European artistic tendencies, while the other came along with the Christianisation and placing importance on sacral architecture around which the city center formed.

The feature with which the city of Krk entices people is its representative medieval heritage.

Today we know Krk as a tourist place of extreme cultural and artistic heritage, where the ancient Splendidissima Civitas Curitarum (glorious city of the people of Krk) lives in a wonderful synergy with the busy nature of the modern age.



### DID YOU KNOW?

The sea is clean, very clean! The town beaches meet the high criteria for quality seawater, and associated amenities: sanitary, hospitality, sporting, recreational, and along with a compulsory note that the beaches provide access to the sea for persons with special needs.

## The Island of Krk

**T**he Island of Krk is situated on the 45<sup>th</sup> meridian parallel, exactly mid-way between The North Pole and The Equator. The biggest advantage of the location is the especially pleasant climate in this area of the Mediterranean, with warm, sunny summers and mild winters

Krk is the island of sunshine, with over 2500 hours of sun annually. The clean sea air and the summer breeze only add to the wholesome, beneficial climate. So, no wonder, that wellness tourism developed at

the beginning of the 20th Century. Due to the climate, the island is rich in many kinds of Mediterranean plant life.

The variety of terrain makes Krk the island of contrasts: areas of thick forest, hills, mountains and fertile valleys intertwine with areas of diversely shaped limestone. The coastline is rugged, with numerous secluded coves, bays and inlets with beautiful sandy and pebbly beaches and Mediterranean plant groves that give a pleasant shade and protect from the Sun.



**Have a creative, inspirational and educative summer in Croatia with Algebra!**





**ALGEBRA**

**INTERNATIONAL  
SCHOOL**

**International Office**

Ilica 242, HR-10000 Zagreb  
Croatia – Europe

**E-mail** [summerschool@algebra.university](mailto:summerschool@algebra.university)

**Phone** 00 385 1 5808 863

**Fax** 00 385 1 2222 183

**More information:**

**[www.summer.algebra.university](http://www.summer.algebra.university)**

Every effort has been made to ensure that the information in this brochure is accurate and up-to-date. However, some changes, for example to programs, courses, facilities or fees, may become necessary due to legitimate staffing, financial, regulatory and academic reasons. In such circumstances, Algebra will: (i) endeavor to keep any changes to a minimum; (ii) take all reasonable steps to minimize disruption to students; and (iii) keep students informed appropriately by e-mail advising where to seek further information if required. If you require further information or confirmation of any matter, please contact us at [summerschool@algebra.university](mailto:summerschool@algebra.university).



Algebra International School



Algebra International School



Algebra\_University



Algebra University College