



Sarajevo School of
Science and Technology

THE SSST WINTER ACADEMY PROGRAMME

18 – 22 JANUARY 2016

*SSST UNIVERSITY, HRASNIČKA CESTA 3A, ILIDŽA,
SARAJEVO*



DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

Day One (18 January) Fun With Algorithms
Time 10:00 – 12:00

Instructor Assist. Prof. Dr. Džejla Međedović

How do you solve a game of sudoku, tic-tac-toe, or 2048? Can you write a program to solve every sudoku fast? How do you make a pretty origami? Can a computer distinguish between a book written by Ernest Hemingway and William Shakespeare? Come to this lecture if you want to see how playing games translates into solving important real-world problems.

Day Two (19 January) 3D Modeling and Animation in Cinema 4D
Time 10:00 – 12:00

Instructor Assist. Prof. Dr. Belma Ramić-Brkić

CINEMA 4D is an easy-to-use yet professional 3D Animation program. Cinema 4D is your gateway to another world and dimension. It is powerful software to bring your creativity and ideas to light. If you ever wanted to dive into 3D now is the time. Although 3D software is very complex, Cinema 4D proves it can be mastered by anyone. By using this program you will be able to create high-end 3D images and animations. During this session, students will be thought how to use this software and therefore create a simple 3D animation through a designed tutorial.

Day Three (20 January) Natural Language Processing
Time 10:00 – 12:00

Instructor Assist. Prof. Dr. Tomas By

Participants will be described the natural language processing used in the IBM Watson system which defeated human champions in the television game show Jeopardy in 2011.

Day Four (21 January) Mobile Programming
Time 10:00 – 12:00

Instructor Assist. Prof. Dr. Almir Mutapčić

Today people are more likely to look up information they need, perform services, or be entertained using their mobile devices, rather than desktop computers. Similarly, there is a growing need for the development of mobile applications. The field of programming has followed this change with many developers focusing solely on mobile apps. In this talk, we will look at the development of native and hybrid mobile applications. In particular, we will

see how one can use the Java language to program Android apps and also how to use web frameworks to develop hybrid mobile apps.

Day Five (22 January)	E-business: Current Trends
Time	10:00 – 12:00

Instructor **Emir Ganić, cPhD**

E-business is the application of information and communication technologies (ICT) in support of all the activities of a business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses i.e. doing business with the help of internet network. During the SSST winter academy condensed two hour session, students will be taught the general principle and applications of e-business in today's companies.

DEPARTMENT OF ECONOMICS

Theme: Structural Reforms: What and Why?

B&H society is faced with declining economic performance. That is endangering the standard of living of its citizens and its future. 20 years of transition have not delivered the necessary structural reforms which are precondition for better economic performance of B&H and better standard of living for its citizens. Our winter academy this year will tackle this question by explaining what reforms are required and why we need them. It is not a matter of a choice being a small open economy; we will either reform or become a failed state.

Day One (18 January)	Small Open Economy of BH: Is Free Market Failing us and Why?
Time	10:00 – 12:00

Instructor **Prof.Dr. Adisa Omerbegović Arapović**

B&H has made a choice 20 years ago to adopt free market economy but it is failing to deliver desired economic growth. This lecture will answer the question why free market economy model has not delivered desired results. We will answer the question what are the necessary preconditions for free market economy to work. What reforms are necessary to undertake for the free market economy to function properly and why we need these reforms.

Day Two (19 January)	Why we have not Reformed: Socio-Political Context
Time	10:00 – 12:00

Instructor **Assist. Prof. Dr. Goran Mirašić**

B&H complex socio-political context is an important ingredient in solving our economic future. In this lecture we will provide presentation of the complexities of socio-political underpinnings of our economic system and provide its relationship to why we have not reformed structure of our economic system.

Day Three (20 January)	The Role of the Government in Promoting Economic Growth
Time	10:00 – 12:00

Instructor **Prof. Dr. Vjekoslav Domljan**

In this lecture we will answer the question as to whether there is a role for the Government in the free market economy and how crucial this role is. What form this role takes in

promoting economic growth is of crucial interest to our economic future and we will tackle this question in this session.

Day Four (21 January)	The State-Owned vs. the Free-Market Economy: A Tale of two Telecoms
Time	10:00 – 12:00

Instructor **Assist. Prof. Dr. Amer Demirović**

How large should be the state in relation to the total economy is a major question particularly relevant in Bosnia and Herzegovina where a large majority of economic activities is controlled by the state. Proponents of a large state cite market inefficiencies and economic inequalities they produce, while free-market advocates point to a dismal performance of the state in managing economic activities. To contribute to this discussion, this lecture examines how the firm values of two major telecom operators in Bosnia and Herzegovina, one private and other state-owned, have increased (deteriorated) over past decade.

Day Five (22 January)	Corporate Social Responsibility in Bosnia and Herzegovina
Time	10:00 – 12:00

Instructor **Dr. Žana Prutina**

Numerous development initiatives rely on corporate social responsibility. Integrating responsibility to society and environment into everyday business brings long term benefits to society and to firms. Strategic approach to social responsibility has also been found to give competitive advantage to companies that employ it. This discussion will focus on the perspectives of CSR in Bosnia and Herzegovina, and its contribution to our country's development.

DEPARTMENT OF POLITICAL SCIENCE AND INTERNATIONAL RELATIONS

Theme: The Study of Politics in Modern Age

The study of politics is about more than the activities of politicians. Students who decide to join the Department of Political Science and International Relations will, of course, examine the workings of political systems worldwide, but they will also explore some of the most significant and thought-provoking issues in national and international politics. This Winter Academy offers a taste in the sort of topics the Department of Political Science and International Relations covers: Who holds power and why? What is the role of social movements in modern-day politics? Is globalization a positive or negative process? What novel identities and affiliations are made at the backdrop of globalization and what is their role in the national political milieu? Can established modes of politics tackle new crises of representations? This Winter Academy, in short, represents a symposium of a number of experts covering the principal areas and political problems of the world today.

Day One (18 January)	Introduction to Social Movements: What is the Role of Activism and Advocacy in Shaping the World we Live in?
Time	10:00 – 12:00

Instructor **Dr. Majda Halilović**

Interest groups and social movements have important role in confronting injustices and oppression and increasing government accountability. As an integral part of social movements, activism and advocacy can take many forms and shapes. Through famous and popular examples of social movements and advocacy this lecture will encourage participants to examine the world around them and explore what impact they can have in shaping it. The lecture is envisioned as participatory and the students will be given opportunity to develop and practice their advocacy messages.

Day Two (19 January)	“European Islam” in Practice? Bosnian Muslims and the Shifting Boundaries of Religious Discourse in Post-War Sarajevo
Time	10:00 – 12:00

Instructor **Dr. Jana Jevtić**

This lecture aims to familiarize students with novel ways of studying religious experience in a post-war context. Rather than focusing on securitization and politicization of Islam, the lecture draws upon ethnography – systematic analysis of people and culture – in order to put forth a conceptual framework in which Muslims are able to choose and contest broad categories amongst the competitive market of religion. As a result, students will be

introduced to new religious actors that emerged against the backdrop of the shifting configurations of social powers which affected nation-state institutions as well as intergenerational change, gender, and class. These actors tested the locus of supposedly “real” Bosnian Islam – European and tolerant – and revealed instead a dynamic and often conflicting understanding of Bosnian Islam and its place in the complex links between Europe and Islam.

Day Three (20 January) The Rise of Extreme Right in Europe and Democratic Regression: Has Democracy Failed?
Time 10:00 – 12:00

Instructor Adnan Huskić, PhDc

Ideas of extreme right in Europe have long been considered the main trigger of World War II. Largely considered obsolete and eradicated in the post-WW2 world, their fairly sudden return to political scene in Europe startled many observers. In addition to the rise of extreme right, another visible trend is the radicalization of mainstream politics and general democratic regression all over Europe. What accounts for these changes, have they already reached their climax and what future holds in store for us and for Europe? Are we witnessing first-hand the reversal of the third wave of democracy?

Day Four (21 January) The Role of International Organizations and International Law
Time 10:00 – 12:00

Instructor Dr. Taida Šarkinović

Traditionally, international law dealt only with the relations between states, and states were the only creators and subjects of the law. Today that has changed, with new actors joining states as both creators and subjects (IGOs, companies, individuals). Thus, the scope and authority of international law have expanded dramatically during the era of globalization. The lecture will focus on the functioning of various international organizational mechanisms in a series of different substantive areas, paying particular attention to human rights, economic law and regulation, development, and the use of force.

Day Five (22 January) Who is Who in Diplomacy?
Time 10:00 – 12:00

Instructor Maja Savić-Bojanić, PhDc

This workshop is designed in such a way as to offer students an interactive and engaging prism into diplomatic functions, immunity, diplomatic communication as well as key players in modern diplomacy. The workshop will begin with an interactive game, followed by a lecture-discussion. It ends with an advanced game which teaches students the basics of everyday diplomatic language and communication.

DEPARTMENT OF MODERN LANGUAGES

Time 10:00 – 12:00

Day One What is So Special about English?

Instructor Sabina Gadžo Mutapčić, MPhil

In the last decade of the 20th century, European officials tried hard to develop an international language that everyone could understand, and that did not belong to any one nation. The language was Esperanto, and it failed to do its job, as the world already had an international language used worldwide – English. So what is so special about English, and why is it so widespread? This lecture will explore the impact of English around the world, and will analyse its most interesting aspects.

Day Two Critical Thinking and Rhetorical Analysis

Instructor Anida Hadžić, MA

F. Scott Fitzgerald once wrote that “the test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function.” This presentation will examine this quote more closely in an attempt to understand what it means to critically examine ideas from multiple perspectives before deciding whether to accept or reject them. We will analyse a number of different texts—political speeches, poems, advertisements, magazine covers—in order to explore how they work to persuade, entertain or educate us. We will consider the role context plays in generating meaning in order to access these texts’ underlying messages. Why do some texts convince us to do something and others don’t? Why are we still reading poetry written hundreds of years ago, and how do we understand it differently today? How do images work to move us?

Day Three Becoming a Translator – the Ins and the Outs

Instructor Sabina Gadžo Mutapčić, MPhil

In 2005, Nicole Kidman had a leading role in the film “Interpreter”, where she plays an interpreter of English and Matobo, a fictional African language, who overhears a plot to assassinate an African president, and becomes deeply involved in political threats and drama. While the life of the everyday translator is not the thrilling stuff of a Hollywood movie, translators and interpreters do sometimes find themselves in situations where their knowledge of two languages is key. But is every person who knows two languages a good translator? Does the translator sometimes have to be more diplomatic, and less accurate? What is confidentiality, and why is it important? What laws do translators live by?

Instructor**Mirela Karadža, PhD**

This lecture will explore several aspects of the place, role and status of teaching English grammar in high school. Extreme commitments (that grammar should not be taught, or the opposite, that it is the basis of every language) in the treatment of grammar in teaching here are refuted, with the focus placed on several specific factors that lead to successful outcomes in teaching grammar. The case studies are the attitudes of students and teachers, obtained using the results of a survey, then the representation of grammar in the official curriculum of teaching, and some didactic and methodological settings.

Day Five

Instructor**Džana Zahirović, PhDc**

Despite the fact that Britain and Germany have been on opposing sides at different times in their political history, either side cannot deny that the two languages are very similar. Did you know that English is a Germanic language? Statistically, English and German have a 60% similarity – and most similarities are in the words we use every day, such as *hand*, *foot*, *house*, *drink*, and *winter*. This lecture will explore the historical development and connections between English and German through the development of vocabulary, grammar and meaning, and will explain when they began to shift from one another. In particular, we will also study “false friends” – the words which sound and look the same in English and German, but have different meanings. *Art* in German means “way or method” and a *Box* is actually a loudspeaker? Find out more in this lecture.

SARAJEVO MEDICAL SCHOOL

Please take notice that the Sarajevo Medical School has a specific and slightly different Winter Academy Schedule:

- All lectures and practical lessons will be held from 19 - 21 January starting at 10:00 and finishing altogether approximately at 14:00.
- In order to make it more interesting, the subjects stated below will be combined during each day.
- The instructors and lecturers will be various for every subject.

Subject Anatomy

We will be using organic, plastic and 3D models together with live ultrasound to learn about the structure of human body and answer few simple questions:

1. What is our body made of? (from cell and tissue to body systems)
2. Everything that happens when you look at the sky (anatomy of head and neck)
3. Where did the lunch go? (anatomy of thorax and abdomen)

Subject Physiology, Immunology and Histology

Basic physiological processes will be demonstrated during two day sessions such as:

1. Measurement of arterial blood pressure
 2. Palpation of arterial pulse oscillation
 3. Auscultation of heart sounds
 3. ABO blood typing and Rh typing
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1. Introduction to electrocardiogram (ECG)
 2. Auscultation of breathing
 3. Microscopy: blood smear, difference between arteries and veins, and histological structure of immune system organs

Subject Medical Chemistry and Biochemistry

Basic Biochemical and Chemical processes will be demonstrated in connection to human health.

Laboratory work:

1. Measurement of pH
2. Detection of hemoglobin
3. Synthesis of aspirin

Subject **Medical Physics**

Introductory 30 min. informative lecture about Physics subjects (I and II study year)

Title of the lecture: **Why do we learn Physics when studying medicine?**

Laboratory work:

1. Sound loudness measurement
2. Building an optical microscope on the optical bench
3. Registration of the ionizing radiation by personal dosimeter.

Subject **Medical Biology**

We are going to introduce molecular biology laboratory and explain why and how are molecular laboratory methods important in medicine. The exercise we are going to do will include introduction of the DNA amplification (PCR) and gel electrophoresis. Students will have an opportunity to make a gel for electrophoresis as well as be able to load samples on the gel and run it. These way students will get hands on experience of molecular biology.