

# MASARYK UNIVERSITY SUMMER SCHOOLS

| SUMMER 2022 |



## LAB INTERNSHIPS

STEM students intern for 250 hours in universities labs with projects ranging from chemistry to biology to anthropology.

## SOCIAL SCIENCES

Numerous of our summer schools highlight the unique history (politically and economically) that Central Europe has to offer.

## SCIENCE SUMMER SCHOOLS

Gain hands on experience in biology, biochemistry, archeology and more

## OUR SERVICES

Masaryk University provides full academic and social support to students. Our state of the art classrooms and libraries enable students to make the most of their academic studies, while the city of Brno allows students to experience Czech culture in an international setting.

All of our programmes offer 24/7 support to students, and organize activities to highlight Czech and local culture.

Masaryk University offers three types of summer schools (1) 3-week long programs, (2) 8/10-week long internships and (3) 2-week intensive courses. These differences will be highlighted in this newsletter.

All the programmes include additional travel to places like Prague, Budapest, Krakow, the Auschwitz Memorial and/or Vienna during their time here, enabling students to experience the best Central Europe has to offer!

Programmes run through the Centre for International Cooperation, as well as some of the faculty programs take trips to Prague, Budapest and Vienna. These excursions are not only fun, but also academic with site visits in each city to expand on the lessons in Brno.

Sample site visits include: Radio Free Europe, UN (in Vienna), OPEC, Hungarian Parliament, Baťa, among others tailored to the program.

Programs listed with an \* includes weekend excursions to these cities



“The highlight was definitely meeting the people and the staff who welcomed us with open arms. We wouldn't have had enjoyed ourselves so much if you weren't there. A big thanks to the student assistants and the teaching staff!”

- Shivaanya

## TOP REASONS TO SPEND A SUMMER IN BRNO

1

Relax, paddle board or swim at the lake.

2

Experience local culture prepared for international.

3

The city is covered by places to eat and hang with friends.

4

Meet people from all over the world!



A sunset over a lake with people in the foreground. The sky is filled with soft, colorful clouds in shades of orange, pink, and blue. The water reflects the colors of the sky. In the foreground, the silhouettes of several people are visible, sitting on the grassy bank and looking out at the water.

# SUMMER 2022 OFFERINGS

*Programs listed with an \* have an early bird discount of €200 for students who apply and commit by 15 February.*



# 3 WEEK COURSES

Fees for these programmes includes tuition, accommodation, 24/7 support, transportation and accommodation on at least 3 weekend trips, social and cultural programming.

## GLOBAL PERSPECTIVES: MEDIA, COMMUNICATION, CULTURE \*

Students in this course will explore how globalization (as process, practice, and system) intersects evolving conceptions of media, communication and culture as international phenomena. Combining classes with site-visits to different companies, industries, and organizations to provide practical examples the course work in Brno, Prague, Vienna and Budapest.

**Dates:** 17 May – 12 June

**Credits:** 6 ECTS

**Price:** €3350, €400 discount for partner universities + early bird discount

**Information:** visit the programme [website](#).



## BIRTH AND DEATH OF DEMOCRACY? \*

The programme provides a broad understanding of state transformation issues in general and from the practical experience of the Czech Republic and its Central European neighbours draws knowledge for potential use in other countries around the world which are undergoing their own transformation/transition process.

**Dates:** 26 June – 17 July

**Credits:** 6 ECTS

**Price:** €2000, €400 discount for partner universities + early bird discount

**Information:** visit the programme [website](#).

# INTERNSHIP OPTIONS

Fees for these programmes includes tuition, 24/7 support, transportation and accommodation on at least 3 weekend trips, social and cultural programming.

## RESEARCH LAB INTERNSHIPS\*

Masaryk University, in collaboration with CEITEC - one of the strongest research institutions in Central Europe, stands apart from other universities as a place to learn. Students work 250 hours over 8 weeks on projects in the fields of microbiology, biology, ecology, toxicology, chemistry, among others. Read about the [student experience](#) from 2021!

**Dates:** 29 May – 23 July

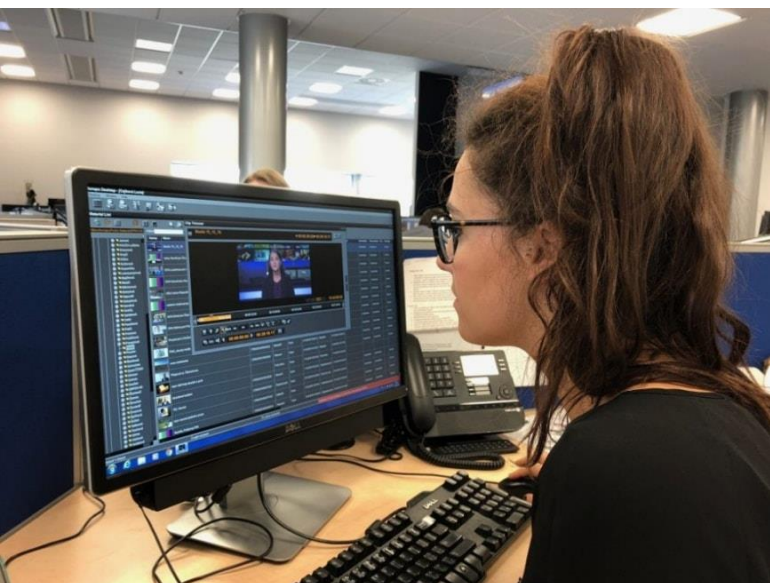
**Credits:** 10 ECTS

**Price:** €3000, €400 discount for partner universities + early bird discount

**Information:** visit the programme [website](#).

Example of Projects (a full list of the projects and their abstracts can be found on our website):

- Isolation of chemical constituents of *Sorbus domestica* fruits with potential antidiabetic properties
- Functional characterization of RgroupASAL3 protein in T lymphocytes
- Toxicokinetic assessment of environmental chemicals in 3D in vitro liver models
- Isolation of selected chemical constituents from different parts of *Ficus* species
- Bibliographic analysis of selected terms in the Social Pharmacy and Pharmacy Practice
- Occurrence and species diversity of wild and semi-wild orangutan parasites
- Development of new chromatin modifying substances for anticancer therapy
- Design and synthesis of new fluorophores for the detection of biomolecules
- Palatinose in food and food supplements
- Isolation of secondary metabolites from plant material
- A database of open clusters based on space-based data



## CZECHMATES INTERNSHIPS\*

Summer internship opportunities within a spectrum of local, regional, and multinational companies in Brno are available for those students seeking an internship option beyond the beaten path to extend their international experiential acumen. Open to students of all majors.

**Dates:** 29 May/12 June – 5 August

**Credits:** 6 ECTS

**Price:** €3000, €400 discount for partner universities + early bird discount

**Information:** visit the programme [website](#).

# INTENSIVE 2 WEEK COURSES

Fees for the following 11 programmes includes tuition, accommodation, 24/7 support, a day trip to Prague or Vienna, social and cultural programming.

**Dates:** 10 – 23 July

**Price:** €1000, €100 discount for partner universities

**Information:** for all the following programmes can be found on our [website](#)

## MEDICAL PHYSICS AND HEALTH INFORMATICS

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The aim of this course is to lay foundation in medical physics with a focus on imaging methods and their aspects covering also safety issues. Part of the curriculum is dedicated to the basics of health informatics and its application in healthcare systems. The course will focus mainly on practical skills with real medical instruments (for example diagnostic ultrasound, electrocardiography, doppler ultrasound, thermography, etc.) and partly on lectures to provide a theoretical background.

**Credits:** 2 ECTS (TBC)

**Eligibility:** The course is designed for medical students or students considering to pursue medical degree

## ENERGY IN EUROPE

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The course provides deep insight into the challenges connected to rapid transition to renewable energy, skyrocketing prices of electricity and natural gas, reliance on oil imports from authoritarian and openly hostile regimes, local opposition to new energy installations, increasing energy poverty, or looming impoverishment of once proud coal regions. The course instructors will do so using interactive tools and in-class discussions, in order to cultivate the students' ability to interpret them within the complex patchwork of European climate and energy policy. The first week of the course is dedicated to the socio-political and techno-economic characteristics of the European energy landscape and sets the stage for the second week, during which the contemporary challenges and paths forward are discussed.

The curriculum requires no specific previous knowledge, and all information is presented in non-technical language. Students of all fields and degrees are welcome.

**Credits:** 2 ECTS

**Eligibility:** Students of all fields and degrees are welcome

# METHODS OF MICROSCOPY IN ARCHAEOLOGY

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The course is based on practical use of various types of microscope. It presents the range of microscopic methods used in archaeology to collect analytical measurable data from the archaeological finds. The course will combine theoretical lectures with seminars where various materials and artefacts will be analyzed.

**Credits:** 2 ECTS (TBC)

**Eligibility:** Students of all fields and degrees are welcome

# SPANISH FOR INTERCULTURAL DIALOGUE

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This course is designed for those who are interested in the language and culture of Spanish-speaking countries. The programme is focused on communication in the contemporary multicultural world and its main objective is to establish a productive dialogue between different cultural areas through literary texts, films and other cultural expressions (music, traditions, etc.). The curriculum is built as a complex programme to deepen not only language skills but also knowledge of culture, literature and contemporary history of those countries where Spanish is used as an official language. It might come as a surprise, but there are many historical and cultural ties that link the Hispanic world and Central Europe, the region where the course takes place.

**Credits:** 4 ECTS

**Eligibility:** Students of all fields and degrees are welcome

# TASTE BRNO, TASTE EUROPE AND DEVELOP YOUR ENGLISH AND COMMUNICATION SKILLS

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This course focuses on developing intercultural communication skills and abilities to communicate effectively in English with people from different cultural backgrounds. Participants will experience the multicultural environment of the student metropolis, town Brno and learn how culture can affect communication and language in various social contexts.

The course will elaborate on how intercultural communication requires an understanding that different cultures have different customs, standards, social norms, and even thought patterns. The participants of this course will be introduced to European culture, history and way of life. They will learn the elementary intercultural skills in an interactive way and get a taste of the variety of flavours that Europe has to offer.

**Credits:** 4 ECTS

**Eligibility:** Students of all fields and degrees are welcome



# ENGLISH FOR UNIVERSITY STUDIES

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This course is ideal for pre-university and university students who need to improve their English language skills in order to meet their university language requirements. The aim of the course is to develop basic academic and study skills in English to achieve at least the level considered to be sufficient for university studies. Specifically, the classes focus on developing abilities to read academic texts and use them in writing and speaking, critical listening to lectures while taking effective notes, speaking in academic contexts and gaining insight into the basic principles of writing academic texts. The sessions will also focus on English grammar and vocabulary as used in the academic environment.

**Credits:** 4 ECTS

**Eligibility:** Students of all fields and degrees are welcome

# 3D PRINTING IN PHARMACEUTICS

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3D printing is gaining attention as the manufacturing tool not only in the engineering industry but also in the field of pharmacy. This intensive course aims to introduce students to different types of 3D printing technologies (FDM, SLA, SSE) with respect to possible uses in pharmacy, mainly pharmaceutical technology. Each module comprises of theoretical base followed by practical preparation of selected drug dosage form and its evaluation.

**Credits:** 3 ECTS

**Eligibility:** Students of all fields and degrees are welcome

# GENDER AND LABOUR MARKET IN DIFFERENT EUROPEAN CONTEXTS

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The course aims to provide the students with a basic understanding of the impact that gender roles and inequalities have on the situation of men and women in society, mostly in the labour market. We tackle the theories about discrimination and segregation of women in the labour market and theories related to the division of labour in the household. Policies for reconciling work and family are introduced as well as the flexible forms of employment in the context of the new trends in the society. In relation to these trends, we focus on the analysis of the potential of social policies to shape and influence gender relations. Space is also given to the feminist critique of the traditional typologies of the welfare state. Furthermore, the role of employers and other actors in the field of reconciling work and family are discussed. Beside the macro-societal perspective, we also give space to the micro-societal/individual level of the analysis, where we focus on the preferences towards work-family strategies and their links to macro-level.

**Credits:** 3 ECTS

**Eligibility:** Students of all fields and degrees are welcome



# SUMMER SCHOOL OF MOLECULAR AND STRUCTURAL BIOLOGY

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This course will introduce modern approaches of experimental research and practical applications of recent findings in the field of molecular and structural biology using cutting edge infrastructure and world class research excellence of Central European Institute of Technology (<https://www.ceitec.eu/>).

The researchers from CEITEC will cover different topics of structural biology, such as virology, protein engineering, computer simulations, plant cell, and developmental biology as well as genomics, cytogenetics and proteomics. Participants will learn about structural biology, imaging, protein characterization by mass spectrometry, X-ray crystallography, cryo-electron microscopy, and NMR spectroscopy methods during a presentation by each of the Core Facility labs represented at Masaryk University Campus.

**Credits:** 2 ECTS (TBC)

**Eligibility:** The course is designed for students of biochemistry, biology, medicine, or similar

# ANIMAL HISTOLOGY AND ORGANOLOGY

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The course is focused on the description of animal tissue structure within the main tissue type categories, description of the structure of animal organs, interpretation of the relationship between the structure and associated function of tissues and organs. The course will include the theoretical and practical part with histological sections presentation, individual work with permanent microscopic preparations and their documentation.

**Credits:** 2 ECTS (TBC)

**Eligibility:** Students of all fields and degrees are welcome, as long as they have knowledge of biology at the secondary school level

# COOK YOUR OWN SURVEY: THE BASICS OF SURVEY METHODOLOGY AND EVALUATION

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Creating a reliable and valid survey is like cooking. Not following a recipe may result in a disaster. The course aims to educate students with a background of social sciences who are likely to use surveys as one of tools of their research or work. It is highly interactive and the students are to try out the demonstrated techniques with the guidance of the lecturers and in cooperation with fellow students.

During the first week theoretical questions concerning survey methodology – advantages and disadvantages of different item formats, selection of the right sample, and wording of your questions, so they're comprehensible both to you and your respondents – are going to be tackled. The second week will be dedicated to skills connected to analysing the data gathered in surveys.

**Credits:** 3 ECTS

**Eligibility:** The course is designed for students of social sciences, humanities, or economics

# HOW TO APPLY

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All applications can be submitted by using our [electronic application system](#). Application requirements depend on the course, and internship placements will require interviews prior to acceptance.

Materials needed:

- Transcript of Records (to show previous courses)
- Passport/EU ID
- Cover letter/motivation statement
- Assessment of English

Applications are reviewed on a rolling basis and typically applicants can expect a response within one week of submitting the application. In order to secure their spot, accepted students will be asked to submit a deposit within 2 weeks of acceptance into the programme.

# APPLICATION DEADLINES

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15 February

- Early Bird deadline for *Birth and Death of Democracy?*, *Global Perspectives: Media, Communication, Culture, Research Lab Internships*, and *CzechMates Internship*.

15 April

- Final deadline for *Birth and Death of Democracy?*, *Global Perspectives: Media, Communication, Culture, Research Lab Internships*, and *CzechMates Internship*.

15 May

- Deadline for all 2 week intensive course programmes.

# COVID-19 POLICY

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Masaryk University wants to provide as much assurance to the safety and health to our participants and teachers as possible while remaining flexible. We will follow the Czech law and recommendations during the time of the summer schools. To see our full Covid-19 policy, including financial implications and refund policies, please visit our [website](#).