University of Nova Gorica

Graduate School

Graduate School

New Challenges in Science

Are you interested in research work and discovering new knowledge? Would you like to contribute to the transfer of new knowledge into practice?

Join our international team of top researchers, professors and experts in our doctoral study programmes: **Environmental Sciences, Physics, Materials, Molecular Genetics and Biotechnology, Humanities, Karstology, Cultural Heritage Studies, Cognitive Science of Language.**

The duration of all doctoral programmes is four years (240 ECTS), of which 60 ECTS are allocated to organised forms of study (obligatory and elective courses), and the rest for students' individual research work, which can be carried out within the research units of the University of Nova Gorica or at other partner research institutions in Slovenia or abroad, with expert support from supervisors, who are excellent researchers with international reputation. All our programmes offer a high degree of electiveness in terms of study contents and are of an interdisciplinary nature, enabling the tailoring of individual doctoral study programmes. Already during their studies, all our doctoral students publish the results of their research work in international scientific journals with a high impact factor. All doctoral programmes are internationally oriented. The language of instruction is English. More than 60 % of doctoral students come from abroad, from various countries worldwide. Our graduates are capable of solving the most difficult tasks in their field of research in an academic or entrepreneurial environment.

More information on doctoral study programmes: www.ung.si/fps/en

Admission requirements:

To enrol in the doctoral programmes, the applicants must satisfy the following admission requirements: the applicants must have completed a 2nd-cycle master's study programme or a four-year academic undergraduate programme accredited with 240 ECTS credits in Slovenia or have completed an equivalent programme abroad. The applicants are expected to have a good command of their written and spoken English language skills. The general minimum level of English language skills required is B2 in accordance with The Common European Framework of Reference for Languages.

Address: University of Nova Gorica, Graduate School ■ **Editor of text:** Prof. Dr. Iztok Arčon ■ **Photos:** Prof. Dr. Anton Brancelj, Dr. Andraž Šuligoj, Dr. Matej Blatnik, Prof. Dr. Jukka Jokilehta, Miha Godec, CasarsaGuru Photography, Veronika Piccinini ■ **Design and press:** A-media d. o. o., Šempeter pri Gorici ■ **Publisher:** University of Nova Gorica, Vipavska cesta 13, Rožna Dolina, SI-5000, Nova Gorica ■ **Print run:** 1000 ■ **Year:** 2019
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Environmental Sciences

The programme is interdisciplinary and research-oriented. The main objective of this study programme is to educate top experts possessing multidisciplinary knowledge in the field of environmental sciences. Students have the opportunity to explore three segments of the environment: water, soil and air. Within individual segments, students can focus on different issues, such as waste management and the effects of waste disposal, advanced procedures and materials for treatment of wastewaters and air, measuring techniques for the detection and monitoring of pollutants in the environment, the physical, biological and health effects of pollution and toxicology. After graduation, they can work as experts in the areas of environmental research, technology, conservation, management and policy development.

Doctoral study programme
Environmental Sciences
P: +386 (0)5 331 53 29
E: info.fps@ung.si

Cultural Heritage Studies

The doctoral programme in *Cultural Heritage Studies* is one of the initiators of post-graduate education in the field of integrated heritage protection in both a national and European context. Since its establishment in 2005, a group of leading international experts from partner universities and institutions has been implementing innovative forms of education that attract students from all over the world. The programme is based on an interdisciplinary integration of basic scientific disciplines and competencies in the field of protection, planning and management of architectural, urban and landscape heritage.

The aim of the study is interpretation of the existing and investigation of new theoretical and methodological fundamentals that ensure understanding of heritage values and to get acquainted with the specific skills that are required to cope with research and professional practice in integrated design of

contemporary and sustainable built environment.
Within the doctoral study programme, students may complete a double degree doctoral study and 1-year second level Master in *Economics and Techniques for the Conservation of Architectural and Environmental Heritage* (ETCAEH), which are both carried out jointly with IAUV University of Venice, Italy. The specific feature of the master programme is the joint diploma issued by both partner universities.

Doctoral study programme
Cultural Heritage Studies
P: +386 (0)5 909 97 00
E: info.fps@ung.si

Physics

The doctoral study programme in Physics provides training in experimental and theoretical physics in the following research fields: astrophysics, astroparticle physics and cosmology, atmospheric physics and condensed and soft matter physics. The programme is designed to enable graduates to pursue successful careers in academia, research institutions and industry. Students learn research methodologies and are exposed to research opportunities during the whole programme. They perform their research work in collaboration with outstanding research teams in the research units of UNG (*Center for Astrophysics and Cosmology, Center for Atmospheric Research, Materials Research Laboratory, Laboratory of Quantum Optics, Laboratory of Organic Matter Physics*) and also contribute in the preparation, development, data acquisition and analysis of experiments done at partner international research facilities such as Pierre Auger Observatory, Cherenkov Telescope Array, Fermi LAT, Swift, Gaia, Large Synoptic Survey Telescope, Liverpool Telescope or at international synchrotron radiation and free-electron laser laboratories (Elettra and FERMI in Trieste, DESY in Hamburg, ESRF in Grenoble or others).

Doctoral study programme
Physics
P: +386 (0)5 365 35 21
E: info.fps@ung.si

Molecular Genetics and Biotechnology

The programme enables education of young experts and scientists, who will be able to apply the acquired knowledge in different fields. As a molecular biologist and geneticist, they will work in biomedicine, food industry or in environmental protection/remediation, while as biotechnologists, they will use their knowledge of new and advanced technologies in the field of industrial production of useful products. The programme envisages intensive research participation of students, seminar

method of work, circulation between laboratories and critical and polemical participation in scientific discussions. Research projects conducted by students during doctoral studies are usually a continuation of the broader research programme of the selected research group.

The programme is implemented in close cooperation with the International Centre for Genetic Engineering and Biotechnology (ICGEB) from Trieste.

Doctoral study programme
Molecular Genetics and Biotechnology
P: +386 (0)5 331 53 29
E: info.fps@ung.si

Karstology

The doctoral study programme in Karstology is a worldwide unique doctoral study programme providing a comprehensive study of karstology, combining study of the karst relief, karst underground and karst waters in one programme. It is designed for students who wish to gain deeper insight in this broadly integrated system of karst sciences. The fundamental objective of the study programme is to produce two types of karstologists. The first is the karstologist-researcher, possessing the competence to perform independent research of karst and karst phenomena from multiple aspects. The second is the karstologist-user or manager, possessing the competence to use the full knowledge of karst conveyed by narrowly specialised experts for different applicative purposes (economy, education, nature protection). The programme is carried out by the Karst Research Institute, operating within the Research Centre of the Slovenian Academy of Sciences and Arts. The research activities take place in the premises of the Karst Research Institute in Postojna, where students are provided with all the necessary professional and scientific support for their own research work. The links between the two institutions in relation to the implementation of the Karstology doctoral study programme were further strengthened in 2014 with

the establishment of the UNESCO Chair at the University of Nova Gorica (UNG) called the **UNESCO Chair on Karst Education**, which is carried out by UNG and the ZRC SAZU Karst Research Institute.

United Nations
Educational, Scientific and
Cultural Organization

UNESCO Chair on Karst Education
University of Nova Gorica in cooperation with
ZRC SAZU Karst Research Institute

Doctoral study programme
Karstology
P: +386 (0)5 620 58 30
E: info.fps@ung.si

Cognitive Science of Language

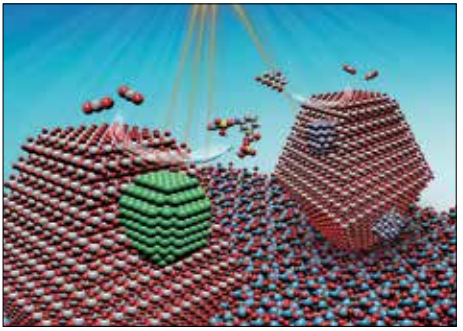
Modern linguistics is part of an interdisciplinary scientific study of cognitive processes in the human brain responsible for comprehension, production and acquisition of natural language. Investigation of these processes enables us to address research questions regarding the nature of the language faculty in the brain (e.g. what is knowledge of language and how it is implemented in the mind/brain). Our doctoral programme provides students with solid education in the core areas of the cognitive science of language, which include formal theories of syntax, semantics, phonology and psycholinguistics. The programme curriculum is based on the scientific thesis that the endowment for language is encoded in the human biological make-up as a system with computational properties. The programme is thus not limited to studying language in its external manifestations (e.g. as a social phenomenon) but rather focuses on the structure of the human linguistic capacity and the biological (and psychological) reality of

that capacity. At the same time, students also learn practical skills that could be applied in creating intelligent systems that understand a natural language, developing therapies for patients with various language disorders as well as advancement of efficient language-learning techniques.

Doctoral study programme
Cognitive Science of Language
P: +386 (0)5 331 52 37
E: info.fps@ung.si

Materials

The interdisciplinary doctoral study programme Materials combines expert knowledge in physics, chemistry, chemical engineering and theoretical chemistry. It offers broad knowledge and skills in designing various types of new functional materials, their synthesis and characterisation, understanding of the relationship between the structure and functional properties of materials and their up-scaling to industrial level. The programme specially focuses on the development of new materials for applications in energy and environmental technologies. The students are involved in



the research work of material science laboratories and centres of UNG and of research laboratories of partner research institutes, such as the National

Institute of Chemistry in Ljubljana, with which we closely cooperate in the implementation of the programme.

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Materials
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Humanities

The study programme Humanities concentrates on three scientific fields: Literary studies, History and Migration and intercultural relations. Studying literary sciences enables students to acquire up-to-date expertise in methodology and theory, indispensable in the research of literature as well as of social phenomena reflected in literary works, taking into account also the context of new media. The students' research topics can therefore concentrate on one of the following areas of literary sciences: new communication media and literature, literatures in contacts, imagology in literary studies, translation as a means of transcultural communication, literature and cultural nationalism in Europe, literary journalism as a transnational and transgeneric discourse, gender and literature, identity and languages.

Study of history is based on modern conceptual and methodological backgrounds in historical science to train the students for research work and for understanding and historical contextualisation of the development of societies from a comparative perspective. The study programme focuses on a comprehensive critical analysis of "different historical realities" and phenomena in the field of cultural, social, economic and political development. This enables understanding and interpretation of the modern world from a historical point of view.

Studying migration and intercultural relations equips students with contemporary methodological and theoretical knowledge, enabling them

to understand the phenomenon of migration, to confront the present migratory processes and phenomena and to understand the identification processes (and the related choice of language) in a multilingual environment. PhD Graduates of the study programme Humanities are fully competent to perform further independent professional and scientific-research tasks and may pursue careers in domestic and foreign institutions or organisations seeking experts in the field of humanities.

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Humanities
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E: info.fps@ung.si

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SI-5000 Nova Gorica
Phone: +386 (0)5 331 5 329
info.fps@ung.si
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