



## ERASMUS POLICY STATEMENT (EPS)

The Henryk Niewodniczański Institute of Nuclear Physics (IFJ PAN) is currently one of the largest research institutes of the Polish Academy of Sciences. A wide range of research carried out at IFJ PAN covers basic and applied studies, from particle physics and astrophysics, through hadron physics, high, medium-, and low-energy nuclear physics, condensed matter physics (including materials engineering), to various applications of nuclear physics in interdisciplinary research, covering medical physics, dosimetry, radiation and environmental biology, environmental protection, and other related disciplines.

The average yearly publication output of IFJ PAN includes over 600 scientific papers in high-impact international journals. Each year, the Institute hosts about 20 international and national scientific conferences. One of the most important facilities of the Institute is the Cyclotron Centre Bronowice (CCB), which is an infrastructure unique in Central Europe, serving as a clinical and research centre in the field of medical and nuclear physics. In addition, IFJ PAN runs four accredited research and measurement laboratories. IFJ PAN is a member of the Marian Smoluchowski Kraków Research Consortium: "Matter-Energy-Future", which in 2012-2017 enjoyed the status of the Leading National Research Centre (KNOW) in physics. In 2017, the European Commission granted the Institute the HR Excellence in Research award. As a result of the categorisation of the Ministry of Education and Science, the Institute has been classified into the A+ category (the highest scientific category in Poland) in the discipline of physical sciences.

The Erasmus Policy Statement published here is the commitment of the IFJ PAN to its academic community, as well as to the external beneficiaries involved in the Institute's policies and to the monitoring institutions, to respect and carefully adopt the principles of the Erasmus Charter for Higher Education 2021 - 2027. We trust that there will be a real possibility of an increased impact on the identified areas for further development of the Institute, as the long-term objectives of IFJ PAN align with the ECHE priority areas. IFJ PAN declares that it intends to take the expected steps to participate fully in the European Educational Area and to contribute to it by disseminating good practices.

The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences intends to continue to use the innovative potential of programs by focusing on the implementation of the following priority: expanding the scope of cooperation with foreign research institutes so that employees and PhD students have access to the scientific achievements of another country, thereby constantly improving their knowledge and skills, which is an important element of their scientific and professional career, and the use of the rich scientific base of the Institute (scientific staff and laboratory equipment) to propagate research carried out at the Institute. This is about enabling the hosting of scientists from Partner Countries at IFJ PAN.

IFJ PAN, guided by the fundamental principles of the Charter, assumes that institution will strive to achieve goals that will be improved by participating in the following activities:

### Key Action 1 "Learning Mobility"

- Student mobility for studies
- Student mobility for traineeships
- Staff mobility for teaching
- Staff mobility for training
- Blended intensive programmes



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An essential element that helps IFJ PAN and doctoral school achieve a leading position among national and international research centres is the cooperation that takes place through participation in international educational and scientific projects. The project's main objective is to ensure conditions for the development of PhD students based on cooperation, internationalisation and interdisciplinarity. The active participation in scientific conferences, international cooperation and the use of the research potential of the IFJ PAN and foreign partners (for example, in the implementation of traineeships and guest lectures) are considered by the IFJ PAN as essential elements of PhD training. The provision of opportunities for doctoral students to actively participate in the international research community is a key element of the project. We believe that since contact with experts worldwide is an essential factor for success, implementing the project's activities will open up new opportunities for doctoral students. Participation in the programme provides access to the necessary exchange of skills, methods and experiences used in the teaching process in other centres, with a view to improving the school's teaching tools. Teaching staff faces new challenges due to rapid progress in areas such as teaching methodology, changing student expectations, the availability of new teaching tools and the possibility of unrestricted use of knowledge resources available on the Internet. The exchange of knowledge, observations and experiences made possible by the direct links established under the programme is one of the answers to these challenges.

The visibility of the results achieved and the recognition of teaching and training activities during the mobility period will be enforced based on a mobility agreement and in line with the institutional strategy. The programme will be an indispensable tool and the best way to establish, maintain and develop possible direct contacts through study visits. Many research directions developed by the Institute's scientists will be expanded as part of the program. Thanks to participation in the programme, developing, publishing and disseminating existing research will also be possible.

## Key Action 2 "Cooperation among organisations and institutions"

- Partnerships for Cooperation
- Partnerships for Innovation
- Alliances for Innovation

About 25 years ago, wide possibilities for the admission of foreign staff and doctoral students were opened. Since then, the doctoral programmes at our Institute have managed to intensify international cooperation, particularly by joining double doctoral projects, e.g. financed by the French government's Cotutelle programme. Since 2014, in cooperation with the University of Ferrara (Italy), the IFJ PAN has been running the double doctorate project "COPERNICUS International Doctorate in Physics". After completion of education and doctoral defence, a double diploma is awarded by IFJ PAN and the University of Ferrara. Recently, the Institute signed a cooperation agreement with Laboratoire de Physique des 2 Infinis Irène JoliotCurie (IJCLab, France). The cooperation will include joint experimental and theoretical projects and the promotion of PhD students. The aim is to identify other universities in Europe and around the world where similar partnerships could be established. Not only will we be able to exchange young researchers between countries, but we will also be able to offer them a double degree, opening the door to an international career.

Participation in the Erasmus+ program can bring many benefits to both the institute and the participants, supporting international development and educational cooperation.

In a completely new context, the years 2024-2027 will see further substantial progress in the mobility of PhD students and institute personnel. There will be even more focus on different



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forms of mobility such as virtual, blended and physical, which can enrich the study programmes offered by specific units, in line with the mission and foresight of the new Erasmus programme. Mobility embedded in study programmes is a key aspect of the Institute's internationalisation strategy, and providing PhD students with the opportunity to gain international experience is one of the main objectives we are pursuing. We also aim to attract a broader range of international partners, not only for future PhD programmes, but also for research partnerships for our academics. We are confident that our participation in the Erasmus + programmes will provide us with additional opportunities to build and develop our academic curriculum and attract new academically valuable guests who can enrich our courses with their lectures. Highly qualified, open-minded and dynamic people are needed to carry out innovative research, development and implementation. Without active cooperation with researchers from outside Poland, international research is not possible. The project will be an opportunity to improve the process of doctoral training and thus contribute to strengthening the position of doctoral students and later graduates of Krakow School of Interdisciplinary PhD Studies (KISD) in the international scientific community. It is the goal of our institute to recruit well-trained, highly qualified staff. They will be able to find their way in the global research environment. In the phase of independent scientific work, the collaborations established within the project will also bear fruit. The project aims to ensure development conditions for PhD students and scientific staff based on cooperation, internationalisation and interdisciplinarity.

Active participation in scientific events, international cooperation and the joint use of the research potential of the units of the Institute and their foreign partners (for example, in the implementation of practical training and guest lectures) are important elements of the training of PhD students. The provision of opportunities for doctoral students to actively participate in an international community of researchers is a key element of the programme. It is obvious that contact with experts in the field is an essential factor for success and that the implementation of project activities will open up new opportunities for doctoral students.

Many cyclical conferences are held at IFJ PAN, the main organisers of which are the institute's research staff. Basically, conferences are meetings of scientists at which the results of current research that a scientific publisher has already reviewed are presented. Conferences are also a place where the results of research carried out at the Institute can be best presented and researchers from other centres can be interested in them. Successful participation in the conference, especially in the case of a research team with a significant participation of young researchers, creates opportunities for this team to establish closer cooperation with other research groups. As a consequence, this creates real opportunities to create a strong international research team capable of playing an important role in global science and obtaining funds for research, e.g. European grants. The optimal solution is for doctoral students to be well prepared to participate in conferences, accompany their supervisors and have the opportunity to present their results independently, to the benefit of the group representing their research centre. The project assumes hosting doctoral students from international universities (from Partner countries and Program countries) at conferences organised by the institute's employees. This will also result in the possibility of publishing the so-called proceedings.

The mission of IFJ PAN is to educate doctoral students' profile scientific careers through the educational program's implementation, taking into account the needs of economic, scientific and social development. Therefore, we place emphasis on adapting the educational offer to the expectations of PhD students and the current challenges of the scientific, economic and social environment. A crucial point in implementing the assumed mission is to create appropriate conditions for the development and education of PhD students. The project's main goal is to guarantee programme participation conditions conducive to development in an international



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environment. The education concept adopted at IFJ PAN takes into account the dynamics of changes taking place in the scientific and economic environment around the world, which creates excellent conditions for achieving the goal of building the European Education Area, among others.

Equally important project objectives are:

- the benefits for the IFJ PAN in terms of increasing the prestige of the research unit at an international level;
- the benefits for the KISD in terms of building up the image of the school;
- the benefits for the doctoral students, for whom the preparation of a dissertation and the obtaining of a doctoral degree is the first step in their academic career.

The main objective of the KISD School - internationalisation - is in line with the main objectives of the Institute. The prestigious HR Excellence in Research Award, which the Institute received in 2017, facilitates international cooperation. IFJ PAN's application of the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, as well as the institute's preparation for the employment of foreign researchers, have been positively evaluated by the European Commission.

Impact of the Institute's participation in the Erasmus+:

- International exchange of knowledge and experience;
- Development of participants' linguistic, intercultural and professional skills;
- Development of scientific cooperation projects;
- Increasing the mobility of students and employees;
- Implementation of ambitious plans without having to bear the full costs.