MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
CHERNIHIV POLYTECHNIC NATIONAL UNIVERSITY

APPROVED BY
Academic council of Chernihiv
Polytechnic National University
31.03.2025, protocol № 4

Put into effect by Rector's Order
№ 67/BC as of 31.03.2025

REGULATION
ON OPEN SCIENCE
OF CHERNIHIV POLYTECHNIC NATIONAL UNIVERSITY

Chernihiv 2025

I. GENERAL PROVISIONS

1.1 This Regulation on the open science at Chernihiv Polytechnic National University (hereinafter – the Regulation) manages the relations regarding open access to scientific publications, research data, preprints, created at Chernihiv Polytechnic National University, as well as procedure of interrelation of open science subjects and open science infrastructure elements of Chernihiv Polytechnic National University.

1.2. The Regulation is developed in accordance with the Constitution of Ukraine, considering laws of Ukraine On information", „On protection of information in automated systems", „On access to public information", „On Scientific and Scientific-Technical Activities", „On scientific and technical information", „On Digital Content and Digital Services", „On copyright and related rights", „On higher education", the Code of Academic Integrity, the Order № 100 as of 31.05.2021, „Students' qualification and individual works plagiarism verification procedure at Chernihiv Polytechnic National University", the Order № 100 as of 31.05.2021 „On the scientific, educational and educational-methodical publications plagiarism verification procedure at Chernihiv Polytechnic National University", the Order № 26 as of 31.08.2020 etc.

1.3. The regulation relies upon the open science and open access principles, determined by: the UNESCO Recommendation on Open Science in 2021, Commission Recommendation (EU) 2018/790 of 25 April 2018 on access to and preservation of scientific information, Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information, Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013, the Model Grant Agreement of the Horizon Europe Framework Programme, and other documents of EU agencies.

1.4 This document terms are utilised with next definitions:

academic text – an original work of scientific, scientific technical and educational kind, implemented as dissertation, final qualification paper, scientific publication, scientific article, report in the scientific and scientific technical activities field, deposited scientific work, textbook, educational handbook, other scientific and educational methodical works.

open access – the group of approaches involved for arrangement of unimpeded and operational access to scientificresults and scientific technical data by means information and communication technology.

open science – the scientific and scientific technical activity implementation approach that involves providing access to the objects of research infrastructure, scientificresults and scientific technical data with capability of utilising them multiply, exchanging and disseminating them by means of information and communication technology for the purpose of scientific technical and societal development acceleration and deepened cooperation between scientists.

open educational resources – materials for study, instruction and research activities in various formats and spheres, that are found in societal property or issued under open license, granting free access, reutilisation, reassignment, adaptation and redistribution by other parties.

researcher – the individual with agreement relations to the University, the latter including educational, educational-scientific workers, the University's students and other University's society members (specifically departed and invited researchers), who utilise the University's resources and execute scientific and research task at the University or somehow else participate in scientific and research project, specifically in projects funded by sponsors;

research data – data and/or metadata, collected and/or obtained throughout fundamental or applied scientific research, utilised specifically for this research and scientificresults confirmation.

the University's IRChNUT electronic archive – the University's open electronic archive, that collects, contains, disseminates and provides with lasting, continuous and secure through-internet access to the materials of scientific, educational *and* educational-methodical purpose, created by various structural divisions workers, as well as by doctoral candidates, postgraduate and undergraduate students of the University;

limited access information – confidential, secret and inside information;

open science infrastructure – virtual and/or material research infrastructure of general utilisation (including scientific equipment and instruments; informational resources, among them journal and archives in open access, data platforms, contemporary research informational systems; bibliometric and scientometric systems, applied for different scientific spheres assessment and analysis; open infrastructure for data calculation and processing, that is necessary for support of open science and satisfaction of academic society scientific and research demands);

scientific activities – intellectual and creative activities main types of which are fundamental and applied scientific research and that are designed for new proficiency acquisition and/or for search for ways of this proficiency application;

scientific result – new scientific knowledge or research data, obtained throughout fundamental or applied scientific research and recorded on data carriers. Scientific result may be implemented as statement, qualification work at scientific and educational-scientific level, preprint, published scientific article, scientific report, scientific message on scientific and research work, monographic research, scientific discovery, regulatory act project, normative document, scientific software, hardware or scientific methodical documents, arrangement of which requires corresponding scientific research conduction or contains scientific element etc.;

scientific technical activities – scientific activities that are designed for acquisition and utilisation of new knowledge for the purpose of technological, engineering, economical, social and human issues resolution; the main kinds of this activities are applied scientific research and scientific technical (experimental) development;

educational scientific activities – educational activities related to scientific and scientific technical activities and occur in universities, academies, institutes, and institutions of postgraduate education;

scientific software – scientific result, obtained throughout fundamental or applied scientific research in the form of executable files, source code or algorithm that is recorded on data carriers. Scientific software can be a part of research infrastructure objects;

optimised research data (FAIR-data) – data that are contained in electronic form and correspond to appropriate research data management principles (FAIR principles);

appropriate research data management principles (FAIR principles) – principles of research data multiple utilisation, accessibility and capability to fit to various data types (interoperability) and to implement necessary information operational search;

the University resources – financial funds, information, specifically advertising, proficiency, material-technical basis and other resources, including equipment, the University's expendable materials, that are utilised throughout scientific, scientific technical and educational-scientific activities;

Inside intellectual property object – intellectual property object produced by an author utilising the University resources during his/her work execution in correspondence to his/her professional duty or employment contract between him/her and his/her employer.

1.5. This policy is valid for all of the University's entire activities, namely for educational process and scientific activities, for all University's researchers and for the results of scientific, scientific-technical and educational-scientific activities, the latter conducted utilising University's resources.

1.6. The policy is not valid for results of activities that are implemented beyond the University's workers professional duties, yet the possibility of University's system utilisation for the purpose of research results publishing and archiving (as the IRChNUT electronic archive, for example) is not declined.

II. PURPOSE, AIMS AND OBJECTIVES OF OPEN SCIENCE AT THE UNIVERSITY

2.1 Purpose of open science introducing and functioning at the University is to ensure possibility of free proficiency exchange and research results reutilisation, as well as the University's integration in European research and educational space.

2.2 The aims of open science introduction are:

– support for dissemination, interpretation and reutilisation of research results;
– increase of research results credibility, reliability and repeatability;
– provision of research results confirmation, development and enhancement possibility;

2.3. For the mentioned purpose and aims achievement it is necessary to:

– develop scientific research at the University as a process, based on academic freedom and integrity, creativity and cooperation, openness and transparency, accessibility and ability of verification;
– implement scientific and scientific technical activities interrelating with educational process and with creation of innovations utilising contemporary information and communication technologies, specifically through: open access to scientific results and

scientific technical information; appropriate research data management principles (FAIR principles);
– provide access to scientific results within law and ethical rules considering factors of limiting open access to scientific results (specifically confidentiality requirements, agreement conditions etc.)
– create conditions for implementation of effective work with scientific technical information and objects of open science infrastructure;
– increase proficiency level and develop competences in open science;
– contribute to the popularity of open science and involve the University's society in participation in projects designed for open science principles introduction;
– develop a high-level of open research culture at the University;

III. OPEN SCIENCE VALUES AND PRINCIPLES

3.1 The University's community members, implementing their academic activities, share and abide by open science values and principles.

3.2 The fundamental principles of open science:

quality and integrity – open science is based on respect to academic and human rights and promotes a high quality research by means of knowledge diverse sources unification and grant of free access to research methods and scientific results, that creates conditions for their diligent analysis and verification involving transparent procedures;

public benefit – as a global public good, open science should belong to and be useful to the whole humanity. For this purpose knowledge should have open access to it, whilst scientific achievements should belong to societal property. Scientific practice should be inclusive, stable and just, specifically when it comes to opportunities of scientific education acquisition and development of potential;

justice and equality – open science should play a significant role as a provider of equal opportunities for researchers from developed and developing countries, creating conditions for just and mutually advantageous exchange of scientific resources and scientific results, as well as equal access to scientific knowledge for both its creators and users, regardless from their location, nationality, race, age, gender, income, social economical conditions, career level, language, religion, impairments, migration status or other factors;

diversity and inclusion – open science should encompass varied knowledge, practices, methods and processes of work, languages, results and topics of research, serving for needs and epistemic pluralism of overall scientific society, various research groups and individual scientists, as well as the public and possessors of proficiency beyond traditional scientific society, including native residence members and local communities, along with social subjects from different countries and regions if necessary.

3.3 The fundamental principles of open science are:

transparency, verification, critical analysis and repeatability – openness should be encouraged at all stages of scientific activity for the purpose of strengthening the reliability and accuracy of scientific results, strengthening of science influence on society

and increasing capability of society to resolve complex interrelated tasks. Increase of openness leads to strengthening of transparency and trust to scientific data, and also reinforces fundamental science bases as a separate knowledge form, established on evidence and verified through logical analysis, expert control and correlation with reality;

equality in opportunities – all scientists and other subjects of open science and stakeholders, regardless of place of living, location, nationality, race, age, gender, income, social economical conditions, career level, specialty, language, religion, impairments, ethnicity, migration status or any other cause, have a right on equal opportunities to obtain access to, make their own contribution to and achieve benefit from open science.

*responsibility, respect and accountabilit*y – the increase of openness leads to strengthened responsibility of all individuals who are engaged with open science. Responsibility, as well as reporting to public, conflict of interest timely recognition and scientific activities potential social and ecological outcomes, intellectual integrity and respect towards ethical principles and research specificities, should become the fundament for proper management of open science; cooperation, participation, and inclusion – cooperation at all stages of scientific activities, beyond geographical, lingual, generational and resource differences should become a rule. Interdisciplinary cooperation should promote complete and effective participation of public representatives, as well as involvement of marginalised groups proficiency into socially significant problems resolution;

flexibility – the presence of diverse scientific systems, individuals and resources, along with rapid development of information and communication technologies, eliminates possible application of universal approaches to instruments and practices of open science, urging institutions to encourage various ways of open science development and implementation, with commitment to fundamental values mentioned above and the utmost consideration of other open science principles; sustainability – work long-term methods, service, infrastructure and funding models provide open science maximum effect contributing to equal participation of scientists from less privileged institutions and countries. Open science infrastructure objects should function and receive funding merely on non-commercial basis, relying on long-term conception, that enhances open science practice and provides continuous and unlimited access for all.

3.4 The University works systematically for the purpose of shaping and developing open science culture among the academic society.

IV. ACCESS TO SCIENTIFIC-BASED CONCLUSIONS OF THE UNIVERSITY.

4.1 The University aims to provide unimpeded access to scientific results with no financial, legal and technical barriers within its own authority and the legislation of Ukraine.

4.2 Scientific results of the University should, if it is possible, be in open access under standard open license Creative Commons (CCBY – Attribution or CC-BY-ND/NC – Attribution – Non-Commercial – No Derivatives);

4.3 The University suggests that researchers should publish their work results in the form of scientific article, scientific message, monographic research in reputable international scientific publications under open access conditions.

4.4 If researchers from the University coact with workers from other institutions, this Policy authority is taken over that part of scientific result, that is obtained by the University scientists, providing there is no specific agreement concerning other scenarios.

4.5 To scientific results, obtained throughout conducting the research defined by agreements, access conditions are applied that are determined by those agreements.

V. ACCESS TO RESEARCH DATA OF THE UNIVERSITY

5.1 The University's research data should be contained in electronic form.

5.2 The University's research data management is implemented in correspondence to the FAIR principles.

5.3 The University suggests researchers to arrange data management plans that determine how to process data in accordance with the FAIR principles at a research initial stage.

5.4 The access to research data is offered through the University's data institutional repository for free and multiple utilisation, preservation and dissemination, providing source is properly mentioned, and for the purpose of confirmation of scientific results, represented in form of scientific report, scientific article, scientific message, monographic research etc.

5.5 The limits to access the University's research data can be set due to several circumstances determined by legislation of Ukraine and/or specific agreements on these data dissemination and utilisation.

5.6 The University's research data may additionally be stored in other data repositories (e.g., Zenodo, Figshare), designed for corporate archivation of the data from various institutions.

VI. OPEN RESOURCES OF EDUCATION

6.1 Educational and didactic materials, produced by University's workers for utilisation in the educational process, should have DOI (Digital Object Identifier), be in the public domain and disseminated open access under licenses of Creative Commons (CC-BY or CC-BY-SA), if this act does not offend applicable legislation regarding intellectual property.

6.2 Scientific open resources are issued and accessed through the University's IRChNUT electronic archive and other external open access platforms.

6.3 It is an obligatory condition that educational resources should be developed within the worker's workload.

6.4 In case of open educational resources being produced through cooperation with workers from other institutions, in an agreement about coaction there should be defined which content parts (exercises, exam questions, educational materials, audiovisual materials of own production) can be available in correspondence to this Policy.

VII. SCIENTIFICRESULTS ACHIEVED BY STUDENTS

7.1 Students' scientific results are available on conditions determined by this Regulation.

7.2 Students' qualification works and research data, providing no restrictions introduced in the eighth part of this Regulation are met, are placed available on the University's IRChNUT electronic archive.

VIII. INTELLECTUAL PROPERTY AND ETHICS

8.1 The University's scientific results and open educational resources, authors of which are the workers of the university, are inside intellectual property objects, and therefore the rules of this Regulation apply to them, considering the access conditions in correspondence to the subsection 4.1.

8.2 Researchers, upon taking the decision to disseminate the research data and scientific results in correspondence to open science principles, must verify whether research contains confidential data or is executed on agreement conditions that make open access provision impossible.

8.3 Publishing scientific results and open educational resources that include intellectual property objects possessed by other individuals, is possible providing the right possessors grant permission on such usage according to procedure determined by the applicable legislation.

8.4 Researchers, before publishing the research data and scientific results in correspondence to open science principles, should verify whether the mentioned documents contain information that requires protection with industrial property objects, specifically with inventions, utility models, industrial designs etc. Free access to scientific results, academic papers, that contain information requiring intellectual property rights protection, is postponed for the period of twenty four months.

8.5 The conditions of the Regulation do not apply on research data and scientific results, containing information with limited access.

8.6 The University suggests researchers to retain the property rights and copyrights to their scientific results that can probably be rejected, and to provide publishers only with rights necessary for publishing.

8.7 The University is bound to provide aid to researchers regarding issues with license, acquisition of intellectual property rights on scientific results and academic papers, assessment of risks of premature publication.

8.8 Researchers should hold to high standards of scientific ethics, avoiding any kind of research data and scientific results manipulations, since this may undermine the trust to authority of the researcher, the University and scientific activities in general.

8.9 The University obligates all participants of scientific-research activities and educational process to follow the Corporate Culture Code.

8.10 The University obligates researchers, who provide access to research data and scientific results, the objects of study of which are humans, to ask the latter for informed consent in correspondence to suggestions of the WMA Declaration Of Helsinki „Ethical Principles For Medical Research Involving Human Participants".

8.11 The University suggests researchers to bear in mind that the identifying information in the results of research, including last name and initials, must not be presented in writing descriptions, on photos and diagrams, unless this information is essential for scientific goals and is accompanied with informed consent from the personal data subject.

IX. OPEN SCIENCE INFRASTRUCTURE OF THE UNIVERSITY

9.1 The University develops the appropriate infrastructure for fulfilling purpose and achieving aims, determined by this Regulation.

9.2 The University's open science infrastructure consists of:

– the University's IRChNUT electronic archive – for providing unimpeded access to scientific results, academic texts, created by researches of the University;

– scientific periodicals publishing platform – for functioning of open access journal, that grant free online access to research data results;

– the University's publishing platform – for publishing educational and scientific publications with open access;

– open scientometric platforms for scientific activities monitoring and assessment;

– server capacities for storing scientific results, research data, open educational resources, and instruments of research confidential data secure management;

– open software for scientific activities implementation;

– open laboratories.

9.3 The University's open science infrastructure specific elements are introduced and backed both by the University itself and within cooperation with other organisations.

9.4 Open science digital infrastructure elements should, specifically, rely on software with source code. These elements may be supported by the State Budget of Ukraine, funds of which are managed by the university, and from sources that are valid according to legislation of Ukraine, including special grant projects for open science development and the target percentage allocated from every funded grant project for the purpose of open science infrastructure development.

X. INCREASE OF KNOWLEDGE AND DEVELOPMENT OF COMPETENCIES IN OPEN SCIENCE FIELD

10.1 To fulfil the purpose and achieve aims determined by this Policy it is necessary to increase knowledge and to develop competencies of all of the University's scientific and educational processes participants in the field of open science.

10.2 The work for increase of knowledge and development of competencies in open science field can be implemented in the next manner:

– inserting open science topics into educational components;

– advance training for educational and scientific workers;

– educational events (providing consultations, recommendations, conducting seminars, round tables or trainings etc.);

– public discussions;

– special actions and campaigns for popularisation (installations, exhibitions, flashmobs, quests etc.);

– research on open science topics.

10.3 Achievements at open science practice introduction (specifically open access to publications and data, contribution to open reviewing, development of open educational resources) are taken into consideration when concluding contracts, advancing and executing within professional duty.