



**Approved by the UTCN
Administration Council**

THE ADVANCED RESEARCH POST-DOCTORAL PROGRAMME WITHIN IOSUD-UTCN **Performance, Excellency and Entrepreneurial Abilities in Post-doctoral**

Research Legal framework

Law 1/2011 amended (The Romanian National Education Law)

The Charter of the Technical University of Cluj-Napoca (hereinafter named UTCN), with amendments

Programme description

The post-doctoral programme:

1. Provides the institutional framework for advanced research development after completing doctoral studies in the specific fields offered by the Organizing Institution of Doctoral Studies within the Technical University of Cluj-Napoca (hereinafter named "IOSUD UTCN");
2. Creates the premises for accessing post-doctoral programme development grants through: national or internal projects (of UTCN), international projects, or upon proposal by the business environment;
3. Is run by IOSUD-UTCN based on the research plan proposed by the post-doctoral researcher and approved by the Doctoral School;
4. Ensures increased visibility of research activities of teaching staff with doctor degrees, researchers and doctoral advisors within UTCN.

Programme length: annually, with a duration of at least one year.

Programme starting date: 15 October of each Academic Year, ever since 2018.

Main objective

Creating a post-doctoral research programme for promoting young researchers of the Technical University of Cluj-Napoca to stimulate scientific excellence and increase entrepreneurial skills.

The proposed institutional programme aims at improving advanced research components and career development opportunities for post-doctoral researchers, by integrating them in the research structures of UTCN and by facilitating access of post-doctoral researchers to advanced research resources. Post-doctoral training requires continuing high-quality academic training as well as professional support through mentorship activities, provided by experts, namely doctoral advisors



affiliated to the UTCN Doctoral School.

The programme enrolls up to 24 post-doctoral researchers/series; the number of attendees is limited by the allocated budget.

The post-doctoral programme will have a long-term impact on the academic community of UTCN through consolidation of specialized knowledge corroborated with the entrepreneurial skills acquired by post-doctoral researchers in connection with the necessities of the local, regional and national business environment.

Specific objectives

- 1 Improving cross-disciplinary training and research in fields accredited by IOSUD-UTCN, using institutional-level advanced research activities and implementing a training programme for entrepreneurial skills, dedicated to post-doctoral researchers.
- 2 Promoting cross-disciplinarity within the post-doctoral training programme, by setting up cross-disciplinary research communities (which will integrate enrolled post-doctoral researchers, but also doctoral students of the UTCN Doctoral School) and by scientific supervision thereof by mentors, doctoral advisors in the fields accredited by IOSUD-UTCN;
- 3 Designing an integrated educational package with training and research activities aimed to stimulate the development of post-doctoral researchers, by assisted development of individual professional and career development plans in the field of research.
- 4 Encouraging the integration of researchers in research teams working on UTCN projects;
- 5 Supporting researchers to attend international seminars and conferences on topics related to their training field, as well as stimulating the publication of post-doctoral research outcomes in renowned national or international journals.
- 6 Increasing the visibility of researchers by supporting/encouraging publications in widely respected international peer-reviewed journals.

The target group of the post-doctoral programme

The target group is made up of young researchers who obtained their doctoral degree up to 5 years before their admission to the post-doctoral programme, who want to boost their research activity within a post-doctoral programme to further develop their doctoral research, and who are part of the UTCN research community and run UTCN projects following graduation from their doctoral programmes.



The enrolment and selection of the target group follow a proprietary selection methodology based on applications made by researchers who wish to enhance their research activity within a post-doctoral institutional framework, for at least one year, to capitalize on and continue their doctoral research. The target group researchers are financed from projects, grants and other means. The research will be supported by UTCN research facilities.

The enrolment and selection of post-doctoral researchers will follow a set of specific criteria related to the relevance of the research topic and their previous results. The activity of post-doctoral researchers will be monitored during the implementation phase of the programme, to improve scientific research capacity, but also of diversifying post-doctoral training methods from the viewpoint of entrepreneurial skills.

Eligible candidates for the post-doctoral programme must have a doctoral degree in one of the IOSUD-UTCN fields:

1. Architecture
2. Computers and Information Technology
3. Civil and Installations Engineering
4. Electrical Engineering
5. Electronic Engineering, Telecommunications and Information Technology
6. Industrial Engineering
7. Engineering and Management
8. Materials Engineering
9. Mechanical Engineering
10. Environmental Engineering
11. Systems Engineering
12. Philology
13. Philosophy
14. Mathematics

The Mentor in the Post-Doctoral Programme

Within the post-doctoral programme, post-doctoral researchers are counselled by mentors of the programme who are usually the directors of the research projects employing the young researchers.

To become mentors, research project directors/coordinators must provide proof of fulfilling the following minimal requirements:

1. They must be UTCN teaching staff and must be at least Associate Professor (2nd-degree researcher equivalent) ;



2. They must have exceptional research results (they should be either research project directors/coordinators or published authors in ISI journals in the red/yellow range;
3. They have co-opted young researchers with a doctoral degree in their projects;
4. They must be part of the UTCN Doctoral School.

The Rights of the Post-Doctoral Researcher Enrolled in the Post-Doctoral Programme

1. The researcher shall be permanently counselled by a mentor;
2. The researcher shall decide together with the mentor on the design of chapters and the individual study programme, individual research activity schedule, etc.;
3. UTCN may cover the accommodation and travel expenses, in compliance with the law, for attending international conferences and seminars related to the research topic, with presentations approved by the post-doctoral mentor, according to the conditions established in the advanced research post-doctoral programme;
4. The researcher shall have permanent access to the research and documentation infrastructure of UTCN, as well as to the UTCN library;
5. The researcher shall have the possibility to publish research results, provided that they fulfil scientific quality standards (certified by the mentor), in UTCN journals and publications.

The Obligations of the Post-Doctoral Researcher Enrolled in the Post-Doctoral Programme

1. The researcher shall strictly follow the schedule and objectives of the individual post-doctoral research project, according to an attendance form signed by the mentor testifying attendance to activities organized within the advanced research programme. Monthly reports shall be presented to the mentor by the 5th day of each month for the previous month.
2. The researcher shall draft quarterly activity and progress reports, signed by the mentor, regarding the status of the post-doctoral research, within 5 days from the end of each quarter.
3. The researcher shall fulfil the following accomplishment indicators:
 - 1 Participation to at least two courses organised within the advanced research post-doctoral programme. The courses shall be coordinated by field renowned experts. The participation is completed with a certificate;
 - 2 The elaboration of innovative and original scientific research in the field of the post-doctoral research project and publication/communication of these results (as a sole author, main author or co-author), following the deontological principles inherent to the scientific research process;



- 3 Post-doctoral researchers in the Fundamental and Engineering Sciences shall have the obligation to:
 - 1 present at least once a year at internationally accredited thematic conferences
 - 2 publish (or receiving acceptance to publish) as main author at least 1 scientific WOS indexed paper per year and at least 2 scientific articles per year in BDI indexed journals no less than a year from programme graduation
- 4 Post-doctoral researchers in Social Sciences have the obligation to:
 - 1 present at least twice a year at nationally or internationally accredited thematic conferences;
 - 2 publish as main author at least 2 scientific articles a year in BDI indexed journals.
1. The researcher shall attend all activities organised within the advanced research post-doctoral programme;
2. The researcher shall draft the Final Research Report, previously approved by the mentor, and shall submit it for evaluation at least 30 days before the end of the institutional post-doctoral programme. This report shall be accompanied by a final activities report, which shall indicate results obtained during the post-doctoral research, as well as the fulfilment rate of the objectives set forth. **The final research report** shall be defended in a public session in front of a specialized committee appointed by the mentor and approved by CSUD, made up of: the mentor (as president of the committee) and two additional members, experts in the post-doctoral research field (UTCN professors or associate professors). The committee might also be joined by industry experts.

The Mentor's Obligations in the post-doctoral programme

1. The mentor shall be directly involved in the internal organisation procedures as well as in the operation of the post-doctoral programme;
2. The mentor shall contribute to the promotion, on a national and international level, of the coordinated post-doctoral research projects, thus stimulating an increased visibility of the UTCN academic community.
3. The mentor shall counsel, monitor, assess and scientifically validate the progress of the individual programme of selected post-doctoral researchers by undertaking the following:
 1. counselling researchers in research structuring, chapter and individual study programme planning, individual research activity scheduling etc;
 2. ensuring monthly progress assessment of supervised post-doctoral researchers;
 3. counselling post-doctoral researchers to fulfil specific performance indicators;
 4. checking and approving monthly and bi-annual activity reports of post-doctoral researchers, following the individual research programme;
 5. providing scientific supervision for post-doctoral researcher articles in view of their



publication, as well as the scientific communications prepared for presentations during national or international conferences;

6. validating the final draft of the Final Research Report of the post-doctoral researchers, in view of publication;
1. The mentor shall select, together with the post-doctoral researcher the research topic and activities to be performed;
2. The mentor may request the termination of the counselling relationship with the post-doctoral researcher. In this case, the Doctoral School shall attempt to identify a new mentor. If a different mentor cannot be identified, the post-doctoral programme is terminated.

ACTIVITIES within the Post-Doctoral Programme

A1. Support for the research activity of post-doctoral researchers

1. Supporting excellence in research of post-doctoral researchers through mentoring activities provided by highly experienced researchers;
2. Developing a practical component of the research by approaching various research-related topics in collaboration with and supported by the business environment;
3. Integrating post-doctoral researchers in research centres and on-going research contracts;
4. Supporting post-doctoral researchers to draft their research project proposals and building cross-disciplinary teams within the University;
5. Supporting publication efforts for post-doctoral researchers, as well as the capitalization of research results in indexed, high impact factor publications;
6. Supporting post-doctoral researchers' attendance to international conferences/congresses with scientific presentations after the post-doctoral research;
7. Facilitating access to existing University computational, technological and documentation resources
8. Supporting post-doctoral researcher mobilities to UTCN partner Universities and Research Centres.

A2. Running education programmes based on practical experience for developing cross-sectional competences The activity may consist of:

1. Developing a complementary education programme for developing entrepreneurial skills in priority economic sectors; (Entrepreneurial Programme);
2. Developing a psycho-pedagogical training programme for developing teaching and communication skills in post-doctoral researchers (Psycho-pedagogic Programme);
3. Developing a career counselling and orientation programme dedicated to post-doctoral researchers (Counselling Programme).



A3. Orienting the post-doctoral programme towards the business environment

- 1 Internships for post-doctoral researchers in the industrial field and access to advanced technologies in the economic field.
- 2 Workshops for initiating and developing academic-industry partnerships meant to support collaborative research of post-doctoral researchers;
- 3 Supporting activities for the protection of intellectual and patenting activities;
- 4 Capitalizing on the results of post-doctoral researchers and technology transfer towards the business environment.

A4. Management responsibilities within the management programme

1. Elaborating methodologies and organising the framework for running the post-doctoral programme (programme promotion, candidate selection, mentor selection, progress monitoring, programme management etc);
2. Setting up new and maintaining existing partnerships with the business environment for supporting the research activity of post-doctoral researchers;
3. Building an IT system to render the management of post-doctoral activities more efficient;
4. Monitoring and assessing post-doctoral programme results; promoting partnerships with similar domestic and international post-doctoral platforms.
5. Promoting partnerships with domestic and international research centres/institutes.
6. Finding national/international competitions dedicated to young post-doctoral researchers.

Rector,

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