"HACKATOM Hungary"

A competition for developing an idea on a topic related to the development of digital solutions to enhance the efficiency of the use of nuclear medicine for the population

WHEN:

May19, 2025 – LECTURES by the experts on the topics related to the case of the competition (**Starting at: 10 am CET)**

May 20, 2025 – PRESENTATIONS by the teams of the projects (**Starting at: 10:00 am CET)**

WHERE:
University of Debrecen

WHO WILL TAKE PART?
Students' teams with up to 5 participants

- Teams consisting of 4 – maximum 5 participants take part in the competition.
- Teams can include students from different specialties, as long as they are from the same university
- Teams are formed in advance and are registered in the respective department - partner of the competition.
- There are no limitations on what technologies will be used
- For each team there will be one tutor from the experts team to assist with the issues related to the solution of the case
- Each team has 10 minutes to present its project. The team could nominate one speaker from the team or all team members can participate in the presentation of the results
- The official language is English

Case description

Among the objectives of the application or another solution being developed should be the instruments and the approaches to enhance the efficiency of providing the population with the nuclear medicine treatment and diagnostic. The solution of the case could, also, focus on the ease of the work of Nuclear Medicine Centers with the patients, as well as on the promotion of the availability of nuclear medicine treatment and diagnostic for simple people in the country.

Examples of the results that each team should submit to the jury:

1. **Block diagram of the proposed application operation algorithm**. For example, it can be organized in the form of a quiz, where, after start the user is asked to answer various questions about their knowledge of nuclear technologies advantages or drawbacks, or interests in nuclear medicine services, compare them according to various parameters, solve simple problems within the framework of such a comparison, etc. Each element of the block diagram should be described in sufficient details. Participants should use proven and noteworthy open sources of information as initial information (which is used in the development of the application and provided to the user as a reference), which will also need to be specified when submitting the project. The result of the application, for example, can be a rating assessment of the

user's knowledge in this area or committed benefits from CNST services application.

2. **Application developed by the team in a ready-to-use form** (for example, in the form of an exe-file, a web application or an application for a mobile phone).
3. **The program code of the developed application**.
4. **Any other solution**

Items 2 and 3 above are desirable if participants have enough time and relevant knowledge in the field of programming and application development, but they are not definitive.

The results of the team work can be presented in the form of a presentation and text documents (for example, a program code). For the presentation of the results of the work, each team will be allocated a predetermined time for the oral presentation of the results; in addition to observing the timing, no restrictions are imposed on the format of this presentation of the results.

Equipment and Software required

In the course of work, no restrictions are imposed on the hardware and software used by the participants. It is assumed that the developed application can be used on a common hardware base (typical personal computers with average characteristics, smartphones, etc.) running one of the main operating systems (MS Windows, MacOS, Android).

Assessment Criteria

The jury members will take into account the originality of the proposed concept (idea) of the application, the choice of individual questions, tasks, etc. for the application, the level of development and implementation of the application.

Jury: TPU experts, Debrecen experts, representatives of Rosatom

Agenda of the HackAtom

DAY 1

Activity	Time	Speaker
Introduction	5-10 minutes	Moderator
Plenary session	20 minutes	Representatives of the University of Debrecen, Rosatom, Russian Embassy
Nuclear medicine technologies: current status and the prospects of the development	20 minutes	TPU
Break	5 minutes	Moderator

Medical isotopes production with the use of nuclear and radiation facilities	20 minutes	TPU
Break	5 minutes	Moderator
Non-power application of nuclear and radiation technologies	20 minutes	TPU
QA	unlimited	all
Setting up the tasks	30 minutes	Moderator
Teams work on the solution of the case	By the end of the day	

DAY 2

Activity	**Time**	**Speaker**
Introduction	5 minutes	Moderator
Team 1	10 minutes	A speaker from Team
Questions to the Team	2 minutes	Moderator and Jury
Team 2	10 minutes	A speaker from Team
Questions to the Team	2 minutes	Moderator and Jury
Team 3	10 minutes	A speaker from Team
Questions to the Team	2 minutes	Moderator and Jury
Team 4	10 minutes	A speaker from Team
Questions to the Team	2 minutes	Moderator and Jury
Team 5	10 minutes	A speaker from Team
Questions to the Team	2 minutes	Moderator and Jury
Team N…	10 minutes	A speaker from Team
Questions to the Team	2 minutes	Moderator and Jury
Break for jury discussion	20 minutes	----
Announcement of the winner	10 minutes	Moderator
	~2-3 hours (depending on the number of teams)	