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Physics. Workshop 9th on Curricula Development: Testing Results, Acceptance and Quality Assurance.

WP5: Dissemination and Exploitation of Results

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Presentation Outline

- **WP5: Aims and Objectives**
- **Tasks**
- **Deliverables**
- **Discussion and suggestions**

❑ Dissemination & Exploitation

- Runs from **Month 1 to Month 36**
- Objectives:
 - ✓ Establish close collaboration between different academic institutions and Ministries of Education that can lead to a better understanding of the practical ways of transition from the existing system to the new 4 + 2 system
 - ✓ Promote smooth transition to the newly accredited system emerging from training programs that extends beyond the project
 - ✓ Presentation of project results, evaluation, and promotion

WP5 Tasks

5.1 Press conferences, press releases, leaflets, posters, TV and radio broadcasts, social media, project logo

5.2 Project website design and development (<http://physics.rtu.lv>)

5.3 Seminar for stakeholders in the Ministry of Education of Belarus

5.4 Information sessions

5.5 Final conference

5.6 Double-sided agreements

5.7 Preparation to 2nd year master program testing

5.8 Conference papers and presentations

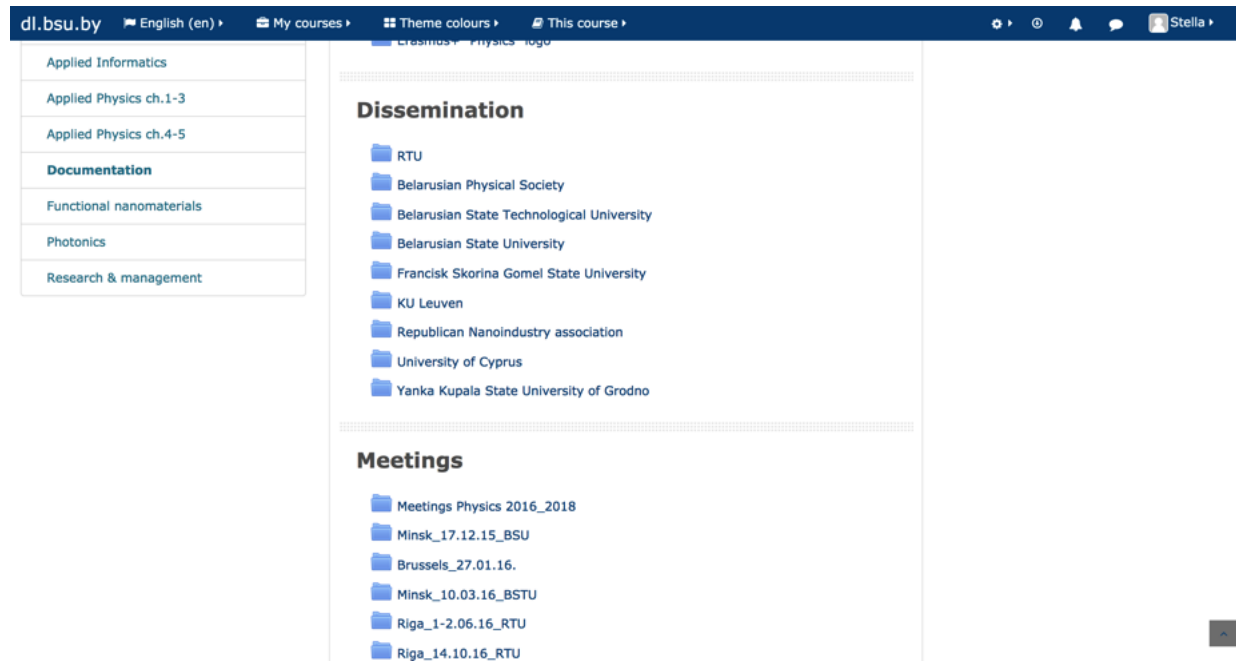
Dissemination and Exploitation Plan

- **Building awareness:** This is the first set of actions that should be undertaken in all dissemination efforts, in order to make sure the project objectives and expected outcomes are known to interested educational and industry stakeholders and to Belarusian society in general.
- **Building understanding:** Further to awareness, the next general objective is to create real understanding of what the project is aiming to achieve. Again, this category of actions addresses not only the primary group of stakeholders but also a broader group of interested stakeholders.
- **Achieving engagement:** The stakeholders of the project are expected to be involved in the whole process beyond understanding its objectives. This calls for actual engagement of interested stakeholders in both the education and industry sectors, either by participating in the reformation of Belarusian higher educational system according to the Bologna practices or by guiding consortium partners in identifying and meeting specific needs in the labour market in the field of functional nanomaterials and photonics.
- **Maximising impact and sustainability:** The ultimate objective of any project is to maximise the final impact to the academic faculty, students, and academic communities and the Belarusian society in general. Therefore, throughout the duration of the project, activities should focus more on ensuring this impact and achieving sustainability of the results.

- ❑ **D.5.1: Information and promotional materials**
- ❑ **Distribution of promotional materials including online advertising**

✓ **Month 36**

- **Press conferences (3) –Publications
(3 conference publications and 2 journal
publications) and press releases (18)**



All dissemination activities need to be uploaded in the Moodle

The matrix for the dissemination activities has been devised

Project Members' Publications, Press Releases, Participation in Local, National, and International Conferences & Other Related Dissemination Activities

Throughout the duration of the project, Physics partners have been actively involved in a wide multiplicity of dissemination activities promoting the project, aims, objectives, and outcomes.

More precisely, in the first year of the project, the total number of published articles, press releases, presentations in local, national, and international conferences and other related dissemination activities were 21.

In the second year of the project, our partners took a more active involvement in this process, with 45 dissemination activities.

In the third year of the project, the total number of dissemination activities was estimated to be 16.

	Year 1	Year 2	Year 3	Total
Total Number of Publications, Press Releases, Conference Presentations in Local, National & International Conferences & Other Related Dissemination Activities	21	45	16	82

Table 1 Dissemination activities throughout the duration of the Physics project

Item	Activity	Responsibility	Due Date	Status
M01 (WP5.1)	Press Conferences	University of Cyprus All Consortium Partners (RTU, KU Leuven, UKSUG, GSU, BSTU, BPS, RANI, MERB)	14.10.2018	✓
M01 (WP5.1)	Press Releases	University of Cyprus All Consortium Partners (RTU, KU Leuven, UKSUG, GSU, BSTU, BPS, RANI, MERB)	14.10.2018	✓
M01 (WP5.1)	Leaflets (Provided at Belarusian Universities such as Belarusian State University, Belarusian State Technical University, Francisk Skorina and Yanka Kupala Grodno State University)	Belarusian State University (BSU) Riga Technical University (RTU)	14.10.2018	✓
M01 (WP5.1)	Posters (Provided at 4 Belarusian Universities: Belarusian State University, Belarusian State Technical University, Francisk Skorina and Yanka Kupala Grodno State University)	Belarusian State University (BSU) Riga Technical University (RTU)	14.10.2018	✓
M01 (WP5.1)	TV and Radio Interviews	All Partners (Yanka Kupala State University of Grodno – 4 TV and Interviews)	14.10.2018	✓
M01(WP5.1)	Social Media	University of Cyprus (All Partners)	14.10.2018	✓
M01 (WP5.1)	Project Logo	Belarusian State University (BSU)	14.10.2018	✓
M01 (WP5.2)	Project Website	Belarusian State University (BSU)	14.10.2018	✓
M01 (WP5.3)	Seminar for Stakeholders in the Ministry of Education of Belarus			✓
M01 (WP5.4)	Information Sessions			✓
M01 (WP5.5)	Final Conference	Belarusian State University (BSU)	12.09.2018	✓
M01 (WP5.5)	Double-sided Agreements			✓
M01 (WP5.6)	Preparation of 2 nd year master			✓
M01 (WP5.7)	Conference Papers and Presentations	All Consortium Partners (RTU, KU Leuven, UKSUG, GSU, BSTU, BPS, RANI, MERB)	14.10.2018	✓

Strategy Devised to Engage the Labor Market

- Consortium partners have undertaken the following strategies to involve the labor market:

(a) Two sets of questionnaire were devised: a curriculum questionnaire and a questionnaire for the evaluation of courses and laboratory study programs.

(b) Then a total of 9 experts who are also members of the Belarusian consortium were interviewed. For example, a total of three experts mainly in the management of the Belarusian Physical Society (BPO) presidium and four experts from the laboratories of the institute of the National Academy of Sciences of Belarus and the heads of the departments/laboratories of Belarusian universities were interviewed.

Some of the conclusions of the questionnaires: 1. 100% of the survey participants approve of the need for the transition of higher education in Belarus to the Bologna 4 + 2 system, which is confirmed by the statistics of answers to questions and explanatory notes to some questions (see tables). 2. 100% of the survey participants approve the need for the introduction of training programs in the specialties "Functional nanomaterials", "Photonics", "Nanomaterials and nanotechnologies". 3. Approximately 90% of the experts interviewed have confirmed the importance of the introduced courses and laboratory works, although the programs themselves have certain comments that will be used to correct (tune) them.

Academic institution/professional association	Number of experts involved
1. The Belarusian Physical Society (BPO)	3 experts [mainly the management of the BFO Presidium]
2. Republican Association of Nanoindustry (RANI)	4 experts [mainly the laboratories of the institute of the National Academy of Sciences of Belarus and the heads of the departments/laboratories of Belarusian universities]
3. Research Institute for Nuclear Problems of BSU (RI for NP of BSU)	2 experts from RI NP of BSU: Deputy Director and Leading Scientific Researcher
4. The Belarusian-Japanese private enterprise LOTIS-TII	1 expert of LOTIS-TII PE: leading engineer for production of high-tech products

Table 4 Experts involved in an effort to engage the labor market

Conclusions of the Questionnaires:

1. 100% of the survey participants approve of the need for the transition of higher education in Belarus to the Bologna 4 + 2 system, which is confirmed by the statistics of answers to questions and explanatory notes to some questions (see tables).
2. 100% of the survey participants approve the need for the introduction of training programs in the specialties "Functional nanomaterials", "Photonics", "Nanomaterials and nanotechnologies".
3. Approximately 90% of the experts interviewed have confirmed the importance of the introduced courses and laboratory works, although the programs themselves have certain comments that will be used to correct (tune) them.

Curricula Approved by the Ministry of Education of the Republic of Belarus

Master's degree program 81 03 Functional nanomaterials_2 years

Master's degree program Physics of Nanomaterials and Nanotechnologies_1 year

Master's degree program 81 02 Photonics_2 of the year 2017

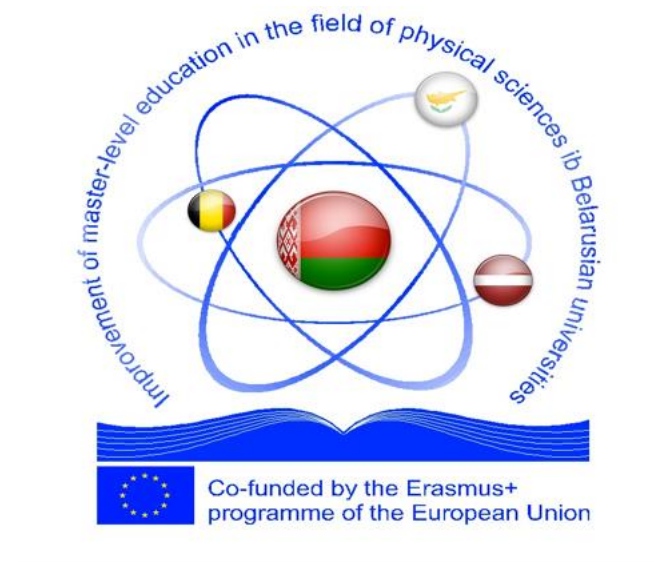
Master's degree program 1-31_81_02 Photonics_1 year 2012

5.1 Press conferences, press releases, leaflets, posters, TV and radio broadcasts, social media, project logo

- Leaflets (RTU) (When were the leaflets provided at the four Belarusian Universities?)
- Posters (4 in Belarussian Universities)
- TV and radio broadcasts (4) – Four already delivered by Dr. Natalia Strekal (Yanka Kupala State University of Grodno)
- Social media (all partners – (LinkedIn & Facebook Groups)
- Project logo



Project posters



Project logo

5.2 Project Website

Deliverables

From July 25, 2016 when the website was launched to Oct. 14, 2016, we had a total of 35 sessions, 23 users, and 90 pageviews. Twenty sessions (57.1%) involved new visitors and 15 sessions (42.9%) involved returning visitors. The average number of pages viewed during a session were 2.57. During our second year of the project, Oct. 15, 2016 to Oct. 14, 2017 the number of pageviews had significantly increased in comparison the first year of the project reaching 1,569. The total number of sessions was 631 and the bounce rate was 2.49. The percentage of new visitors was 51.3% and the percentage of returning visitors was 48.7%. In the third year of the project, Oct. 15, 2017 to June 26, 2018, the

		Metric	Year 1	Year 2	Year 3
A. Monitoring Web Presence on the Project's Website	Total Sessions		35	631	355
	Unique Visitors				
	Pageviews		90	1,569	1,200
	Page/Visits (Average no. of pages viewed during a visit to our website)		2.57	2.49	3.38
	Bounce Rate (Percentage of Single Page Visits)		54.29%	34.71%	43.38%
	Percentage of New Visits		57.1%	51.3%	83.1%
	Percentage of Returning Visitors		42.9%	48.7%	16.9%
	Average Visit Duration		00:01:34	00:03:13	00:03:21

Audience Overview

SAVE

EXPORT

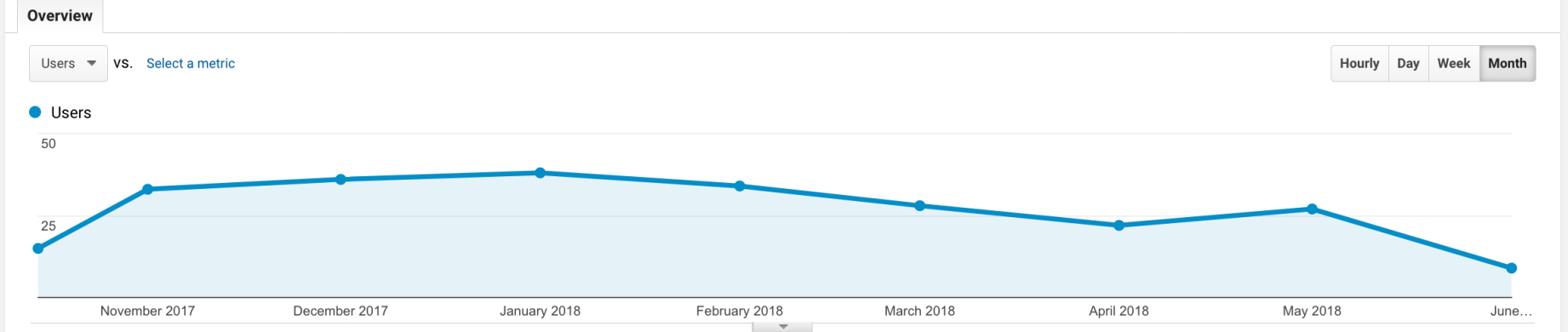
SHARE

INTELLIGENCE

All Users
100.00% Users

+ Add Segment

Oct 15, 2017 - Jun 26, 2018



Users
204

New Users
196

Sessions
355

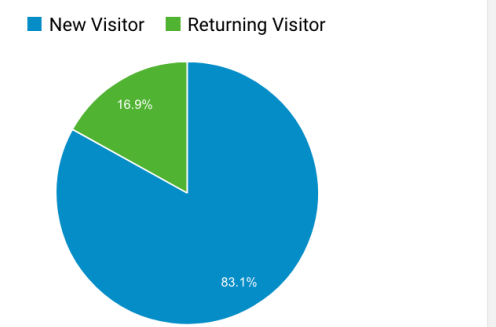
Number of Sessions per User
1.74

Pageviews
1,200

Pages / Session
3.38

Avg. Session Duration
00:03:21

Bounce Rate
43.38%



Demographics		Language			
Language				Users	% Users
1. en-us				64	31.22%
2. ru				39	19.02%

TOTAL NUMBER OF STUDENT AND INSTRUCTOR TRAINING SESSIONS OFFERED BY PHYSICS' PARTNERS

Four training sessions were successfully organized and offered during the Physics project. The first student training session was held at Technology Campus in Ostend between February 2, 2017 and February 11, 2017 where 14 students from Belarusian State University, Gomel State University, Belarusian State Technical University, Francisk Skorina Gomel State University, and Grodno State University received training in applied physics at Technology Campus Ostend at KU Leuven. Four instructors were involved in delivering these courses. A specially tailored English course entitled, "English language course for teachers" was provided at KU Leuven where a highly experienced English instructor introduced a total of 13 Belarusian instructors to key technical terminology in English. The third student mobility and training session was held at Riga Technical University where 21 students and 6 faculty were involved.

The fourth student training session was held between 5 and 16 of February, 2018 at the University of Cyprus in Nicosia between 5 and 16 of February, 2018. 14 students from Belarusian State University, Gomel State University, Belarusian State Technical University, Francisk Skorina Gomel State University, and Grodno State University received training in power systems, renewable energy systems, power system analysis, simulation software for power transmission systems, introduction to MATLAB, artificial molecular devices and many other-related courses. 3 faculty members from Belarus State University, Grodno State University, and Belarusian State University also participated in this process. 6 researchers and one faculty member from the University of Cyprus also participated in delivering these courses.

	Metric	Year 2	Year 3	Total
A. Student Training in Applied Physics Technology Campus Ostend KU Leuven (6/2/2017- 11/2/2017)	Number of Students Enrolled in these Courses	14		
	Number of Physics Partners Involved in Delivering these Newly Devised Courses	4		
A. English Language for Lecture Purposes Ostend KU Leuven (June 9, 2017 – June 13, 2017)	Number of Physics Partners Involved in Delivering these Newly Devised Courses	1		
	Number of Instructors Involved in Devising and Delivering these New Language Lectures	13?		
A. Student's Mobility and Technical Training in Riga Technical University, (September 24 – October 7, 2017)	Number of Students Enrolled in these Courses	21?		
	Number of Physics Partners Involved in Delivering these Newly Devised Courses	6?		
D. Student Training in Nicosia University of Cyprus (February, 2018)	Number of Students Enrolled in these Courses		14	
	Number of Physics Partners Involved in Delivering these Newly Devised Courses		4	

Facebook (60 members: the number is still very low)

Deliverables

The screenshot shows a Firefox browser window displaying a Facebook group page. The browser's address bar shows the URL <https://www.facebook.com/groups/515719888598785/>. The group's name is "Improvement of master-level education in physical sciences" and it is a public group. The cover photo features a stylized atomic model with three orbiting spheres: a Belgian flag, a Belarusian flag, and a Lithuanian flag. The group has 60 members, as indicated by the "60 Members" text and a red arrow pointing to it. The left sidebar contains navigation links: About, Discussion, Members, Events, Photos, Files, Group Insights, and Manage Group. The main content area includes a "Write Post" section with a "Write something..." prompt, a "Recommended Groups" section with "Link Existing Group" and "Create New Linked Group" options, and a "Recent Activity" section showing a post by Stella Kyprou. The right sidebar shows an "ADD MEMBERS" section with a search bar, a "MEMBERS" section with 60 member avatars, a "SUGGESTED MEMBERS" section with three suggested members (Hanh Giannetta, Paula Canali- Giannetta, and Kay Papandreou), and an "INVITED" section with two invited members (stsiapura@... and elias@...). A red arrow points to the "60 Members" count in the MEMBERS section.

[illegible]

Accreditation Received: it needs translation to English


 УТВЕРЖДАЮ
 Первый заместитель Министра образования
 Республики Беларусь
 В.А. Богущ
 2017 г.
 Рег. № 6 31-2-044 /мн.

ТИПОВОЙ УЧЕБНЫЙ ПЛАН
 по специальности высшего образования второй ступени (магистратуры)
 Специальность: 1-31 81 03 Функциональные наноматериалы
 Степень: магистр физики
 Срок обучения – 2 года

I. График образовательного процесса

Номера недель	Месяцы (ориентировочно)	Виды деятельности, установленные учебным планом	Примерный объем учебной работы		
			Всего часов	Аудиторных часов	Самостоятельной работы
01-18	Сентябрь-декабрь (18)	Теоретическое обучение и научно-исследовательская работа	972	324	648
19-21	Январь (3)	Экзаменационная сессия	162		162
22-23	Январь-февраль (2)	Каникулы			
24-40	Февраль-июнь (17)	Теоретическое обучение и научно-исследовательская работа	918	306	612
41-44	Июнь (4)	Экзаменационная сессия	216		216
45-52	Июль-август (8)	Каникулы			
53-70	Сентябрь-декабрь (18)	Теоретическое обучение и научно-исследовательская работа	972	324	648
71-73	Январь (3)	Экзаменационная сессия	162		162
74-75	Январь-февраль (2)	Каникулы			
76-82	Февраль-март (7)	Теоретическое обучение и научно-исследовательская работа	378	126	252
83-84	Март-апрель (2)	Экзаменационная сессия	108		108
85-90	Апрель-май (6)	Практика	324		324
91-96	Май –июнь (6)	Итоговая аттестация	324		324
Итого			4536	1080	3456

WP5 Tasks

- **Report on Progress on the following:**
 - Accreditation received (in Russian)
 - Seminar for Stakeholders in the Ministry of Education of Belarus (WP 5.3)
 - Information Sessions (WP 5.4)
 - Press conferences & other publications – **please update dissemination activities in Moodle**
 - Leaflets (RTU) - Realized
 - TV and radio broadcasts (4) – Professor Natalia Strekal; Realized
 - Social media (Please join the FB and LinkedIn group and invite colleagues and students to join)

Action items/remarks

- Please provide the information on accreditation received in English;
- Seminar for Stakeholders in the Ministry of Education of Belarus (WP 5.3)
- Information Sessions (WP 5.4);
- Update dissemination activities in the Moodle
- There was some progress in the traffic generated to the project website; however, the website needs to be promoted further after presentations, events, etc. in order to generate even more traffic;
- Traffic and membership in our FB group and LinkedIn group is relatively low;

Thanks for your attention

Questions & Discussion