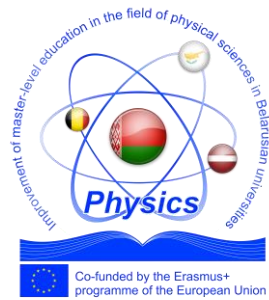




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# **Improvement of master-level education in the field of physical sciences in Belarusian universities, Acronym: "Physics"**

**Management meeting Workshop 9th on curricula development:  
Testing results, acceptance. Quality assurance.**

**June 27 – 28<sup>th</sup> 2018**

**University of Cyprus**

**Anatolijs Zabašta, RTU**

Agenda	Time	Contributor
<b>June 27<sup>th</sup></b>		
<b><i>Registration</i></b>	<b><i>9.00</i></b>	
Welcome University of Cyprus. Adoption of the agenda. Project progress	9.30	UCY, RTU
Testing of new developed and modernised courses in Spring semester. Accreditation of the courses/ programs.	10.00	
Reports on new developed courses, teaching materials and study programs and its accreditation in the universities.	10.30	RTU, BSU, GrSU, GoSU and BSTU
Reports on testing of the courses, teaching materials and study programs.	10.45	BSU, GrSU, GoSU and BSTU
Feedback from the industry representatives on developed curricula. Report on the feedback.	11.00	BSU
<b><i>Coffee break</i></b>	<b><i>11.30</i></b>	
Implementation of curriculum, Book on Applied Physics (WP 2), final version.	12.00	KU Leuven
Implementation of curriculum, Book on Applied Informatics (WP 2), final version.	12.15	RTU
Implementation of curriculum, Book on Functional Nanomaterials (WP 2), final version.	12.30	BSU
Implementation of curriculum, Book on Photonics (WP 2), final version.	12.45	BSU
Implementation of curriculum, Book on Guidelines on Master Thesis in Applied Physics (WP 2), final version.	13.00	UCY
<b><i>Lunch</i></b>	<b><i>13.15</i></b>	

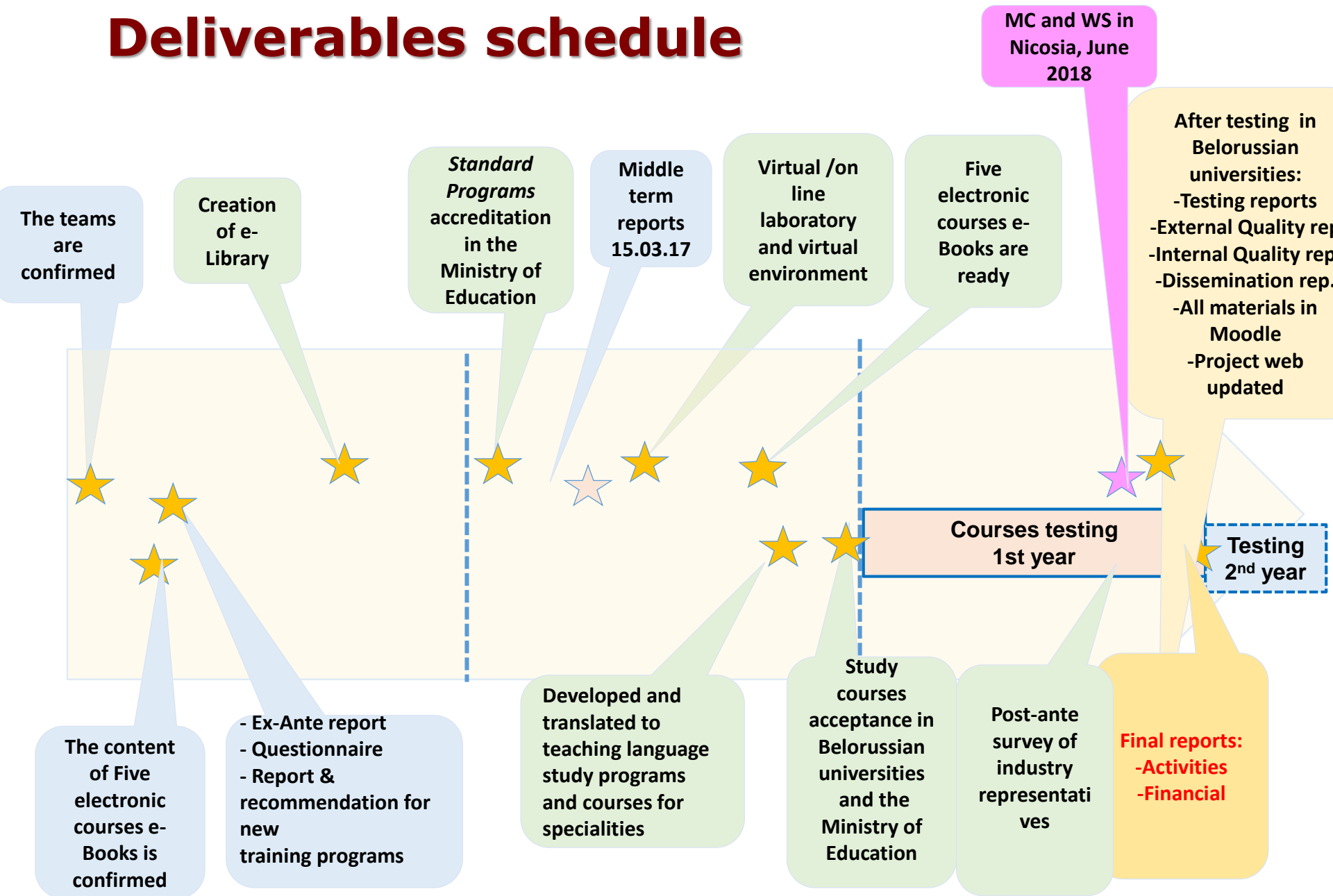
Dissemination and Exploitation of results. Dissemination & Exploitation plan (WP5)	14.00	UCY
Application of innovative teaching methods & electronic environments (WP3). Progress.	14.30	KU Leuven
Arrangements to final Technical (activities) report	14.45	RTU, all partners
Project sustainability's issues. Activities beyond the project.	15.00	RTU, all partners
Quality assurance issues. Monitoring and evaluation by external expert	15.30	RTU
Arrangement of the Final Conference on September 12 <sup>th</sup> , BSTU, Minsk	16.00	BSTU, BSU, GSU, GrSU
<i>Coffee break</i>	<i>16.15</i>	
Project financial aspects and arrangements for the Final Financial reports.	16.30	RTU
Last meeting in Nicosia, September 26-27 <sup>th</sup> . Other issues	17.30	All participants
Conclusions, next steps.	18.00	RTU and all partners
<i>The end of the 1<sup>st</sup> day</i>	<i>18.30</i>	

## June 28<sup>th</sup>

June 28 <sup>th</sup>		
Feedback from the previous day discussions	9.00	All partners
Visit to UCY laboratories and sites	9.30	UCY
Continuing of discussion about curricular (WP2)	10.30	All partners
Issues of common interest. Bilateral meetings.	11.00	All partners
<i>Coffee break</i>	<i>12.00</i>	
The end of the day	12.30	

# **Project progress**

# Deliverables schedule



**Reports on new developed courses,  
teaching materials and study programs  
and its accreditation in the universities.**

**Testing of new developed and modernized courses in *Spring semester*. Accreditation of the courses study programs**



# Grodno SU

## Description of the courses tested during the 1<sup>st</sup> testing year

	Course name	Credit points	Level (Bachelor, Master)	ECTS credit points	Preliminary number of students	Type of delivery (lecture, lab, practical)	Duration of the course (from - till)	Type of control (test, exam)	Background subjects/ preliminary knowledge
<b>Grodno State University</b>	Nanophotonics	3	Master	3	9	Lectures, Labs	1/09/17 – 10/01/18	exam	
<b>Grodno State University</b>	Physical and chemical methods of analysis	3,5	Master	3,5	8	Lectures, Labs	1/02/18 – 30/06/18	exam	
<b>Grodno State University</b>	Optical methods of investigations	1,5	Master	1,5	14	Lectures, Labs	1/02/18 – 30/06/18	test	

Most comprehensive report! Provides clear analyses of testing results.

## Description of the courses tested during the 1<sup>st</sup> testing year

	Course name	Credit points	Level (Bachelor, Master)	ECTS credit points	Preliminary number of students	Type of delivery (lecture, lab, practical)	Duration of the course (from - till)	Type of control (test, exam)	Background subjects/ preliminary knowledge
<b>Belarusian State Technological University (BSTU)</b>	Theoretical basis of polymer processing	3,0	1-year 1,5-year	4,0	4	Lecture	01.09.17 – 25.01.18	Exam	Chemistry and physics of polymers, Theoretical basis for processing polymers and composites, courses of special disciplines

# Gomel SU

## Description of the courses tested during the 1<sup>st</sup> testing year

	<b>Course name</b>	<b>Credit points</b>	<b>Level (Bachelor, Master)</b>	<b>ECTS credit points</b>	<b>Preliminary number of students</b>	<b>Type of delivery (lecture, lab, practical)</b>	<b>Duration of the course (from - till)</b>	<b>Type of control (test, exam)</b>	<b>Background subjects/ preliminary knowledge</b>
<b>Gomel State University</b>	Physics of wave processes	4	2-year master	4	10	2-year master	09.02.18 – 12.04.18	exam	Molecular Physics, Electricity, Quantum Mechanics, Thermodynamics, Fundamentals of material science

# Comments to Testing reports

- Lack of list with the name of students participating in testing/ training
- Lack the names of teachers.
- The tables with testing results of the teachers are missed.
- Attachments to the Report for **the evidence**:
  - filled in questionnaires with the answers,
  - screenshots of dissemination events, etc.
- To allocate the reports in <https://dl.bsu.by> (we can see only BSU report).

**WP2:**  
**Book on Applied Physics**

# **Implementation of curriculum, Book on Applied Informatics**

# **Book on Functional Nanomaterials**

# **Book on Photonics**



# Electronic books

- The Electronic books are prepared and published in e – library <https://dl.bsu.by/index.php?> :
- **Master Thesis Guidelines in Applied Physics Editors: Stella Hadjistassou and Elias Kyriakides**
  - The book is well edited, the last version is uploaded on 29.05.2018
- **Applied Informatics Editors: Leonids Ribickis, Nadezhda Kunicina.**
  - The book is well edited, the last version is uploaded on 26.03.18.
  - The minor changes in the chapter 2 – Control theory are foreseen from prof. Zhiravecka
- **"Applied Physics": Editor: Joan Peuteman.**
  - The book is well edited, the final version is uploaded August 2017
- All books where additionally submitted to Printing house of RTU, however due to the financial problems, RTU printing house is not able to print books now.
- Now we are in discussion with printing house, how we can index this version of book, without professional editing (2 – 6000 euro/ book),
- The best solution is to submit it in library as hand print version, and to start editing of books in 2019 (if RTU will have additional finance's for this from special budget of Vice Rector of education).

# **Book on Guidelines on Master Thesis in Applied Physics**

# **Book on Guidelines on Master Thesis in Applied Physics**

# **Dissemination and Exploitation of results (WP5)**

# **Application of innovative teaching methods & electronic environments (WP3)**

# **Management meeting**

# **Feedback on 3rd progress report – arrangements for Final report**

- Final Financial report: 01.11.2018
- Final Technical Report: 01.11.2018

# Technical report – ES Agency recommendations

- Recommendations and necessary improvements, which are still in progress:
  - A new version of Dissemination plan should be developed. Strategy to engage the labor market and overcome the reluctance towards 4+2 Bologna type degrees – UCY and other partners prepared the Plan and the Report (working versions)
  - Demonstrate complementary with the TEMPUS project – please put in your reports (BSU)
  - To explain the role of associated partners - please put in your reports!
  - To demonstrate project outputs at website – more information is allocated
  - Inter-institutional agreements or bilateral agreements signed/to be signed by partner country institutions to promote cooperation in the field of education and/or research, as a result of cooperation in Erasmus+.



# Final Report

- **For each of the Partner Countries** included in the consortium:
  - a) **List 3 main achievements/results** of your project at institutional, national and/or regional level;
  - b) Explain how the **achievements/results** are relevant to the policy area (national and/or regional),
- **Please provide information and quantify the inter-institutional agreements or bilateral agreements** signed/to be signed by partner country institutions to promote cooperation in the field of ..
- Describe and justify where and when **equipment items** have been installed and **how they have been used in the project and will be used in the future**;

## 7) Links with society

- Explain how the project helped to strengthen the role of **higher education institutions in society at large**;

## 1) Involvement of partners and stakeholders

- how partners will **continue to cooperate in the future**;

# Final Report

## 3) Sustainability / exploitation of results

- Explain the role, commitment and concrete measures taken by the **partner country beneficiaries** to **guarantee the sustainability** of the project outcomes/results beyond the project's lifetime (**specify the funding sources** if known);
- Explain how you have achieved a **multiplier effect of the project**; how the results have been **exploited beyond the immediate target group** and transferred to other contexts (for example to the wider education system, **local economy and society**, other institutions, other regions, etc.);
- What measures have been taken to formalise or institutionalise **links with local non-university partners**?
- Please explain if any **measures** have been put in place in order **to enlarge the** implementation of the project **results/outcomes beyond consortium** participants;

# Final Report

## 1) Previous recommendations/follow up

- Explain how the **recommendations** given by the Agency (**in the assessment of the Technical report, in the feedback from monitoring visits, in monitoring exchanges with the Agency, etc.**) have been followed up, addressing each recommendation separately and highlighting steps and measures taken.

*В том числе от Белорусского Контактного Пункта (Листонад)*

## 5) Innovation

- If applicable, describe to which extent the project **has proved to be innovative** and how do the project's results offer innovative and creative solutions to promote capacity building

# Developed and modernized courses

University	Course Title	Updated or totally newly created	Level (Bachelor, Master 5-year course)	Volume ECTS credit points	Preliminary number of students	The teaching/training methodologies developed/adopted e.g. e-learning/ training modalities, practical placements in enterprises, etc	The link to the university's webpage	Type of control (set-off, exam)	The status of recognition/accreditation (by the university or a country institution)
BSU	Composite nanostructured materials	totally new	1-year/ 2-year masters/ 5-year course	2,0	5	Lecture	<a href="https://dl.bsu.by/mod/foilder/view.php?id=30554">https://dl.bsu.by/mod/foilder/view.php?id=30554</a>	exam	University validation

# **Tenders for the equipment**

# **Monitoring and evaluation by external expert**

# **Project financial aspects and arrangements for the Final Financial report**

# Equipment

- Compliance with procurement rules:
- Compliance with eligibility of costs:
- **Tendering procedure:**
  - The Rules of tender,
  - Announcement of tender;
  - 3 offers from suppliers,
  - Decision of the Tender committee.
  - Contract with supplier
- **Invoices**
- Bank statements
- Proof that the equipment is recorded in the inventory of the institution



# The common errors made by beneficiaries for Equipment

- Invoices are not detailed enough to establish a clear connection to project activities.
- Deductible VAT is included in the invoice and charged as project expenditure;
- Tendering procedure is not applied for the purchase of goods or services exceeding 25.000 EUR;
- Purchase of equipment is split into smaller contracts with individual amounts lower than the 25.000 EUR threshold;
- Proof of expenditure is a **pro-forma invoice**, an offer or a quotation instead of **an invoice**.

# Cost calculation - salaries

- **Managers (staff category 1)** (including legislators, senior officials and managers) carry out top managerial activities related to the administration and coordination of project activities.
- **Researchers, teachers and trainers (RTT) (staff category 2)** typically carry out academic activities related to curriculum/training programme development, development and adaptation of teaching/training materials, preparation and teaching of courses or trainings.
- **Technical staff (staff category 3)** (including technicians and associate professionals) carries out technical tasks such as book-keeping, accountancy, translation activities..
- **Administrative staff (staff category 4)** (including office and customer service clerks) carries out administrative tasks such as secretarial duties.

# Supporting documents for Financial report

- A formal **employment contract** is required.
- The **Time-sheets** must be signed by the person concerned and countersigned by the person responsible.
- A duly filled in **JOINT DECLARATION** for each person employed by the project
- The **JOINT DECLARATION** must be signed by the person concerned, then signed and stamped by the person responsible (e.g. the dean) in the institution where this person is normally employed.
- For staff performing different categories of tasks a separate **DECLARATION** must be signed for each type of activity.

# Instructions for a Auditor – staff cost

For the employees selected, the Auditor checks that they:

- were hired by the beneficiary in accordance with its national legislation;
- were:
  - employed by the Institution and they were part of its payroll system, or;
  - were natural persons assigned to the project on the basis of a contract against payment;
- were performing tasks directly necessary to the achievement of the objectives of the project;

Which documents should the beneficiary prepare for the auditor?

- *Employment contracts* for the staff in question, as well as *standard employment contracts* in use for personnel who perform a variety of work for the beneficiary
- A duly filled-in Joint Declaration
- If the staff member performs tasks corresponding to different categories of staff, a separate Joint Declaration must be signed for each category.
- Time-sheets

# Instructions for a Auditor – staff cost

- Any material evidence allowing to verify that the declared workload corresponds to actual activities/outputs
  - attendance lists for lectures given,
  - tangible outputs / products (developed courses, reports etc.)
  - salary slips, etc.

# Instructions for a Auditor - Travel cost

- for Travel costs, the distance travel bands have been applied correctly;
- for Costs of Stay, the number of unit costs declared corresponds to the actual number of days of the activities (including the travel).

## Which documents should the beneficiary prepare for the auditor?

- Any proof that the journeys actually took place and are connected to specific and clearly identifiable project-related activities.
- A duly filled-in Individual Travel Report
- ***Supporting documentation***

# Instructions for a Auditor - Travel cost

- Supporting documentation will have to be attached to each travel report in order to demonstrate the fact that the travel and the activity actually took place
  - travel tickets,
  - boarding passes with points of departure and destination,
  - dates and name of the person travelling,
  - invoices, receipts,
  - proof of attendance in meetings and/or events,
  - agendas,
  - tangible outputs/products, minutes of meetings).

# **Further tasks and the next steps**



# Meetings and trainings

Place	Responsible	Meeting topics and responsible for the topics	Date
Minsk	BSU	Workshops for curricula development	The end of July 2018?
Minsk	BSTU	Final conference	September 12 <sup>th</sup> 2018
Nicosia	UCY	MC7 and WS10: Workshops for curricula development. Communication and sustainability of the project results. Quality assurance. Final reporting.	September 26-27 <sup>th</sup> 2018

# **Final conference for dissemination**

- Date: September 12<sup>th</sup>
- Participants: invitations for the stakeholders
- The place of the conference
- Agenda
- Logistics: translation, coffee brakes etc.

# Further tasks and the next steps

- Courses e-books: finalizing!
- Dissemination:
  - Press conferences: 1 in each Belarus university
  - Press releases
  - Web and E-environment – improvements
  - References to the project and its website!
  - Facebook, YouTube and LinkedIn
  - Publications at the scientific conferences
  - **Final conference for dissemination**
- Sustainability:
  - All materials to be allocated at <https://dl.bsu.by/> and at websites of the partners
  - Dissemination and Sustainability plan
- Accreditation
- New curricular testing – spring semester. Testing reports.
- Quality assurance:
  - External report
  - Partners reports
- **Final reports:** Financing and Technical (activities)

# Questions