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**Educational Establishment
“Mozyr State Pedagogical
University named after
I.P.Shamyakin”**

HEAD OF MSPU TEAM



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First Vice-Rector
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MSPU TEAM



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of Theoretical Physics and
Applied Informatics, PhD in
Physics
and Mathematics,
Associate Professor

Area of responsibility: Development of
E-Study and Methodology Complex

«ELECTRODYNAMICS»

The e-complex focus much attention on:

- Establishment of correlations between the principles of object-oriented engineering and regularities of Physics,
- Excellence of skills for software engineering;
- Systematization of knowledge in Physics.



Alexandr Golub

**PhD in Physics and Mathematics,
Associate Professor,
Chair of Theoretical Physics
and Applied Informatics**

Area of responsibility: Development
of E- Study and Methodology Complex

«OBJECT-ORIENTED DESIGN»

This complex will focus much attention on:

- Study the connections between the principles of object-oriented design and basic principles in Physics,
- Enhancement of students' skills for software design;
- Systemization of knowledge in Physics.



Alexandr Makarevich,

PhD in Physics and Mathematics,

Associate Professor,

**Chair of Theoretical Physics
and Applied Informatics**

Area of responsibility: Development
of the Academic discipline

«MODELLING OF PHYSICAL PROCESSES»

The discipline will focus much attention
on:

- Fundamentals and methodology of computerized modelling of physical processes and phenomena in Mechanics, Molecular Physics, Optics, Thermodynamics, Electrodynamics;
- Study of possibilities of computer models in MATLAB.



Valentina Davydovskaya,
PhD in Physics and
Mathematics,
Associate Professor,
Chair of Theoretical Physics
and Applied Informatics

Area of responsibility: Development of E-Study and Methodology Complex

**«MODERN INTEGRATED PACKAGES
FOR ANALYSIS AND MODELLING
OF PROCESSES AND SYSTEMS»**

This complex will focus much attention on:

- Development of practical skills for work with modern integrated packages MathCAD and MATLAB;
- Basic knowledge about functions and possibilities of software design in the systems MathCAD and MATLAB in the field of modelling of processes and systems.

Area of responsibility: Development
of E-Study and Methodology Complex

«RESEARCH PROBLEMS IN PHYSICS»



Inessa Kovalchuck,
PhD in Pedagogics,
Associate Professor,
Dean of Physics
and Engineering
Department

This complex will focus much attention on:
The e-complex focus much attention on:

- Establishment of correlations between the principles and regularities of Physics,
- Excellence of skills for creative thinking;
- Systematization of knowledge in Physics.

MSPU preliminary tasks for Erasmus+

- MSPU will develop study courses, lecture course, didactic materials
- Didactic and educational materials will be developed and then addressed to secondary school teachers (total 4 new and 1 updated course)
- Purchase of hardware/software for virtual and physical laboratory
- Acquisition a virtual lab and innovative ICT teaching methods and tools
- Teaching staff and students flow for training in EU universities
- Arrangement of WS and MC meetings in Mozyr
- MSPU is a leader of the E-Book Elaboration “Computer Modelling of Physical Processes (handbook for students and PhD students)”

Discipline	Developer	Validated by		Status of the discipline	
		Authority	Date	Date	For bachelor degree programs
Research problems in Physics	Kovalchuck I.N.	MSPU Research and Methodology Council	26.06.2020	<i>Already started</i>	«Physics and Informatics» «Computerized Physics»
Modern integrated packages for analysis and modelling of processes and systems	Davydovskaya V.V.	MSPU Research and Methodology Council	16.11.2020	January-June 2021	«Computerized Physics»
Object-oriented programming	Golub A.A.	MSPU Research and Methodology Council	16.11.2020	January-June 2021	«Computerized Physics»
Computer modelling of physical processes and phenomena	Makarevich A.V.	MSPU Research and Methodology Council	30.06.2020 (№ 20/7-599)	<i>Already started</i>	«Physics and Informatics»
			June 2021	2022	«Computerized Physics»
Electrodynamics	Ovsiyuk E.M.	MSPU Research and Methodology Council	27.01.2020 (УД-20/5-587/уч)	<i>Already started</i>	«Physics and Informatics»

MSPU MOODLE

- <http://moodle.mspu.by/course/view.php?id=848>

The screenshot shows a Moodle course page with the following structure:

- Header:** Course title "СОВРЕМЕННЫЕ ИНТЕГРИРОВАННЫЕ ПАКЕТЫ ДЛЯ АНАЛИЗА И МОДЕЛИРОВАНИЯ ПРОЦЕССОВ И СИСТЕМ (ДАВЫДОВСКАЯ В.В.)" and a breadcrumb trail: "В начало » Курсы » Физико-инженерный факультет » Кафедра теоретической физики и прикладной информатики » СИП".
- Left Sidebar:**
 - Новостной форум
 - ТЕОРЕТИЧЕСКИЙ РАЗДЕЛ**
 - ЛЕКЦИЯ 1
 - ЛЕКЦИЯ 2
 - ЛЕКЦИЯ 3
 - ПРАКТИЧЕСКИЙ РАЗДЕЛ**
 - Требования безопасности при проведении лабораторных (практических) занятий
 - ЛАБОРАТОРНАЯ РАБОТА 1
 - ВСПОМОГАТЕЛЬНЫЙ РАЗДЕЛ**
 - УЧЕБНАЯ ПРОГРАММА
- Right Sidebar:**
 - НАВИГАЦИЯ:** В начало, Страницы сайта, Текущий курс, СИП (Участники, Общее), ТЕОРЕТИЧЕСКИЙ РАЗДЕЛ, ПРАКТИЧЕСКИЙ РАЗДЕЛ, ВСПОМОГАТЕЛЬНЫЙ РАЗДЕЛ, РАЗДЕЛ КОНТРОЛЯ ЗНАНИЙ, Курсы.
 - КАЛЕНДАРЬ:** Декабрь 2020. Legend: Скрыть общие события, Скрыть события курса.
 - ПОИСК ПО ФОРУМАМ:** Search input field, Применить, Расширенный поиск.
 - ПОСЛЕДНИЕ НОВОСТИ:** (Пока новостей нет)
 - ПРЕДСТОЯЩИЕ СОБЫТИЯ:** Нет предстоящих событий.

MSPU MOODLE

- <http://moodle.mspu.by/course/view.php?id=835>

The screenshot shows the Moodle course interface for 'Электродинамика Е.М.Овсюк'. The main content area is divided into several sections:

- Новостной форум**: A section for news and announcements.
- Электродинамика**: The main course title, with a link to the 'Пояснительная записка' (Explanatory note).
- Теоретический раздел**: A section for theoretical topics, containing a list of lecture topics:
 - Тема 1. Специальная теория относительности
 - Тема 2-1. Электромагнитное поле. Уравнения Максвелла
 - Тема 2-2. Электромагнитное поле. Уравнения Максвелла
 - Тема 3. Уравнения для потенциалов электромагнитного поля
 - Тема 4. Уравнения электродинамики в 4-мерной форме
 - Тема 5. Свободное электромагнитное поле в виде плоской волны

The right sidebar contains several utility sections:

- НАВИГАЦИЯ**: A navigation menu with links to 'Страницы сайта', 'Текущий курс', 'Участники', 'Общие', 'Электродинамика', 'Теоретический раздел', 'Практический раздел', 'Раздел контроля знаний', 'Вспомогательный раздел', 'Презентации', and 'Курсы'.
- КАЛЕНДАРЬ**: A calendar for December 2020, showing dates from 1 to 31.
- Легенда событий**: A legend for events, with options to 'Скрыть общие события' and 'Скрыть события курса'.
- ПОИСК ПО ФОРУМАМ**: A search box with a 'Применить' button and a link to 'Расширенный поиск'.
- ПОСЛЕДНИЕ НОВОСТИ**: A section for recent news, currently showing '(Пока новостей нет)'. There is also a 'ПРЕДСТОЯЩИЕ' section below it.

MSPU MOODLE

- <http://moodle.mspu.by/course/view.php?id=831>

The screenshot shows the Moodle course interface. At the top, the course title is "ОБЪЕКТНО-ОРИЕНТИРОВАННОЕ ПРОГРАММИРОВАНИЕ" by "А.А.Голуб". Below the title, there is a breadcrumb trail: "В начало » Курсы » Физико-инженерный факультет » Кафедра теоретической физики и прикладной информатики » ООП".

The main content area features a "Новостной форум" (News forum) section with the course title "ОБЪЕКТНО-ОРИЕНТИРОВАННОЕ ПРОГРАММИРОВАНИЕ" and a sub-section "ОБЪЕКТНО-ОРИЕНТИРОВАННОЕ ПРОГРАММИРОВАНИЕ".

The right sidebar contains several utility sections:

- НАВИГАЦИЯ** (Navigation):
 - В начало
 - Страницы сайта
 - Текущий курс
 - ООП
 - Участники
 - Общие
 - ОБЪЕКТНО-ОРИЕНТИРОВАННОЕ ПРОГРАММИРОВАНИЕ
 - Курсы

- КАЛЕНДАРЬ** (Calendar):
- Декабрь 2020

Вс	Пн	Вт	Ср	Чт	Пт	Сб
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		
- Легенда событий** (Event Legend):
- Скрыть общие события
- Скрыть события курса
- ПОИСК ПО ФОРУМАМ** (Search Forums):
- Search input field
- Применить (Apply)
- Расширенный поиск (Advanced search)
- ПОСЛЕДНИЕ НОВОСТИ** (Latest News):
- (Пока новостей нет) (No news yet)

MSPU MOODLE

- <http://moodle.mspu.by/course/view.php?id=468>

The screenshot shows the Moodle course interface for 'Исследовательские проблемы физики (Шепелевич В.В.)'. The main content area is divided into several sections:

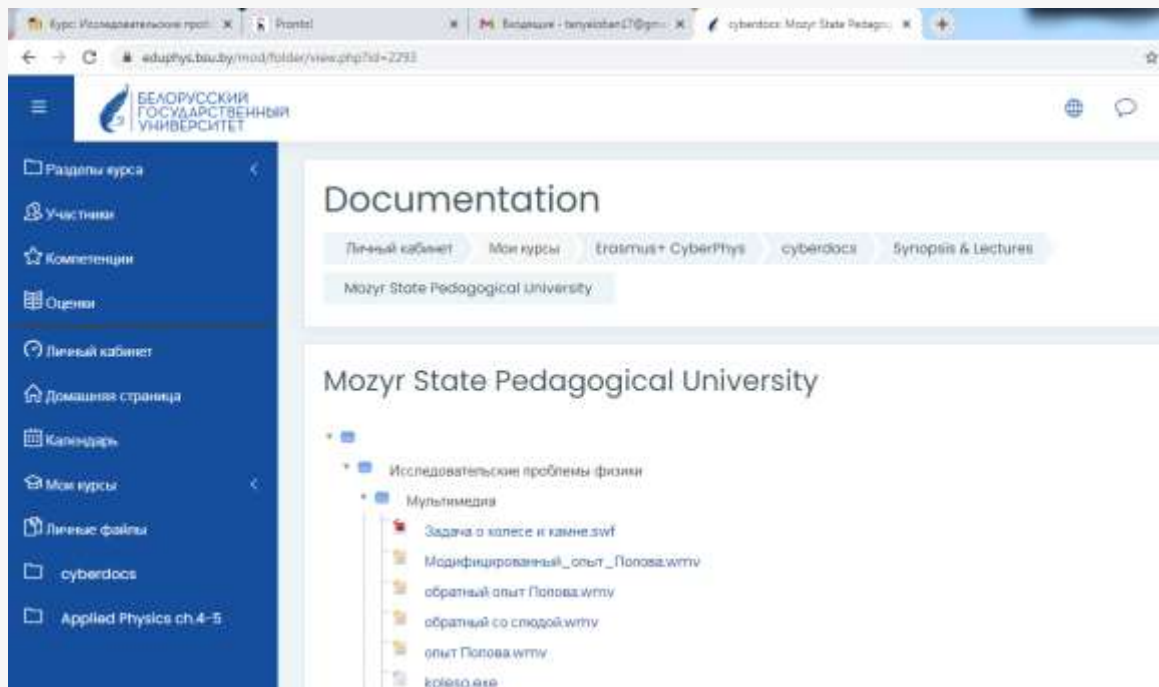
- Новостной форум** (News forum)
- Титульный лист** (Title page)
- Познавательная записка** (Informational note)
- Теоретический раздел** (Theoretical section) with a link to **Курс лекций** (Lecture course)
- Практический раздел** (Practical section) with a link to **Практические занятия** (Practical sessions)
- Раздел контроля знаний** (Knowledge control section) with a link to **Вопросы на занятии** (Questions during the session)

The right sidebar contains several utility widgets:

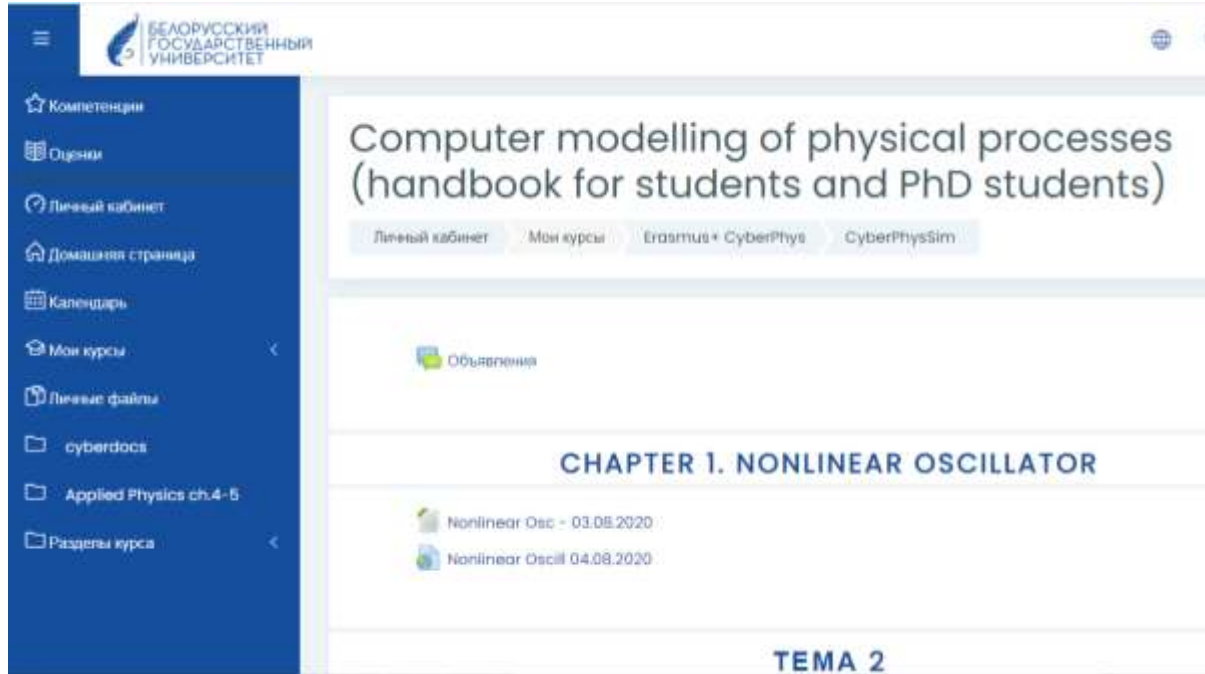
- НАВИГАЦИЯ** (NAVIGATION): A tree view showing the course structure, including 'Текущий курс' (Current course) and 'Исследовательские задачи по физике Шепелевич В.В.' (Research problems in physics by V.V. Shepelovich).
- КАЛЕНДАРЬ** (CALENDAR): A calendar for December 2020 with a legend for events.
- ПОИСК ПО ФОРУМАМ** (FORUM SEARCH): A search box with a 'Применить' (Apply) button.
- ПОСЛЕДНИЕ НОВОСТИ** (RECENT NEWS): A section indicating that there are no news items at the moment.

BSU MOODLE

- <https://eduphys.bsu.by/mod/folder/view.php?id=2293>



BSU MOODLE



The screenshot shows the Moodle LMS interface for the course "Computer modelling of physical processes (handbook for students and PhD students)". The interface is in Russian. The left sidebar contains a navigation menu with the following items: "Компетенции", "Оценки", "Личный кабинет", "Домашняя страница", "Календарь", "Мои курсы", "Личные файлы", "cyberdocs", "Applied Physics ch.4-5", and "Разделы курса". The main content area displays the course title, navigation tabs for "Личный кабинет", "Мои курсы", "Erasmus+ CyberPhys", and "CyberPhysSim", and a section for "Объявления" (Announcements). The current page is titled "CHAPTER 1. NONLINEAR OSCILLATOR" and lists two documents: "Nonlinear Osc - 03.08.2020" and "Nonlinear Oscill 04.08.2020". At the bottom of the page, the text "ТЕМА 2" is visible.

<https://eduphys.bsu.by/course/view.php?id=106>

Thanks for your
attention!