**New courses**

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| **#** | **New course** | **Responsible person** | **Status** |
| 1 | Internet of Things | Andrei Deryushev | Developed |
| 2 | Equation of mathematical physics | Igor Timoshchenko | Developed |
| 3 | Fundamentals of mathematical modelling | Igor Timoshchenko | Developed |
| 4 | Mathematical physics | Igor Timoshchenko | Developed |
| 5 | Mathematical modelling of physical processes | Alexander S. Fedotov | In progress |
| 6 | High-Performance computing for numerical simulations and data analysis | Oleg Romanov | In progress |
| 7 | Mathematical modelling for fluid- and gas dynamics | Oleg Romanov | In progress |
| 8 | Data mining and acquisition | Anatolii Zherelo | In progress |
| 9 | Development of applications for high-performance computing (laboratory practicum) | Oleg Romanov / Sergey Bachanovich | In progress |
| 10 | Simulations of physical processes using high-performance computing systems (laboratory practicum) | Oleg Romanov | In progress |
| 11 | Modern approaches to Big Data analysis (laboratory practicum) | Anatolii Zherelo | In progress |
| 12 | Applications of computer modelling | Vasily Volkov | Developed |

**Modernized courses**

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| --- | --- | --- | --- |
| **#** | **Modernized course** | **Responsible person** | **Status** |
| 1 | Information Technology | Andrei Deryushev | In progress |
| 2 | Programming for supercomputers | Sergey Bachanovich | In progress |
| 3 | Mathematical analysis | Natalia Brovka | Modernized |
| 4 | Computational physics and information technologies | Oleg Romanov | Modernized |
| 5 | Computational methods in physics and physical experiment | Oleg Romanov | Modernized |

**E-Books**

**4th e-book:** Modern Mathematical Physics: Fundamentals and Application

**Leader:** Belarusian State University (BSU), Prof. Natalya Abrashina-Zhadaeva

**Co-authors: BSU –** Natalya Abrashina-Zhadaeva (zhadaeva@bsu.by)

**BSU** – Natalya Brovka (brovka@bsu.by)

BSU – Igor Timoshchenko (timoshchenkoia@bsu.by)

**Progress:** 1) content of the e-book has been developed (5 chapters)

2) draft version of text for each chapter prepared and uploaded to Moodle-platform

3) assessing the readiness of the e-book – 50%

**5th e-book: High-Performance Scientific Computing and Data Analysis**

**Leader:** Belarusian State University (BSU), Prof. Vasily Volkov, Dr. Oleg Romanov

**Co-authors:** BSU – Vasily Volkov ([v.volkov@tut.by](mailto:v.volkov@tut.by))

BSU – Oleh Romanov ([romanov@bsu.by](mailto:serza1979@gmail.com))

BSU – Anatoly Zherelo ([Zherelo@bsu.by](mailto:asprou.markos@ucy.ac.cy))

BSU – Sergei Bakhanovich ([bsv@am.bas-net.by](mailto:bsv@am.bas-net.by) )

RTU – Arnis Lektauers ([arnis.lektauers@rtu.lv](mailto:kunicina@latnet.lv))

BSU – Aleksandr Kozlovski ([kozlovskia@bsu.by](mailto:vvkazymyr@gmail.com))

**Progress:** 1) content of the e-book has been developed (Introduction + 9 chapters)

2) draft version of text for the chapters 1,2, 7−9 prepared

3) assessing the readiness of the e-book – 35%