

APPROVED BY
Director of Institute of High
Technology Physics

_____ Alexey N. Yakovlev
_____ “ _____ ” 2016

COURSE DESCRIPTION

1. Name of course **RADIATION EFFECTS IN SOLIDS**
 2. Notation (code) in curricula **M1.BM3.4**
 3. Field (primary curriculum) **Electronics and Nanoelectronics**
 4. Training profile (program) **Physical Electronics**
 5. Qualification (degree) **master**
 6. Supporting subdivision **Department of High Voltage Electrophysics and High Current Electronics**
 7. Professor **Victor Y. Yakovlev**, tel. **606234** *E-mail* **yak999@rambler.ru**
 8. Course mastering results
At the conclusion of the course the student will be able to:
 - demonstrate an understanding of basic concepts and applied aspects of electronics
 - analyse current situation in particular cases
 - set aims and objectives for electronic devices design and scientific research
 - choose appropriate theoretical and experimental methods for problem solving
 9. Module (course) contents
 1. Crystalline structure of solids
 2. Effect of dense pulsed beams on materials
 3. Radioluminescence of semiconductors and dielectrics
 4. Radiation defects in crystals and glasses
 10. Year **1** semester **1** number of credits **3**
Number of delivery hrs: **108 total**
 - contact - **48**
 - online - **0**
 - independent studies - **60**
 11. Prerequisites **Condensed matter physics, Physics, Numerical Analysis**
 12. Corequisites **Pulsed energetics and electronics, Methods of experiment in high-current electronics**
 13. Type of assessment **credit test**
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