

Imaging Methods in Medicine

Examination topics for the state doctoral examination

1. General overview of the imaging methods in medicine, their principles, benefits, disadvantages, possible side effects (related to the topic of the dissertation of the student).
2. Basic techniques of imaging methods in medicine (related to the topic of the dissertation of the student).
3. Indications and algorithms of imaging methods in medicine (related to the topic of the dissertation of the student).
4. New trends, special applications, development and perspectives of imaging methods in medicine (related to the topic of the dissertation of the student).
5. Problems of courses completed by the student (related to the topic of the dissertation of the student).
6. Basics of the digital image processing in medicine (related to the topic of the dissertation of the student) – see the literature.
7. Basics of scientific work and statistics (related to the topic of the dissertation of the student).
8. Scientific and professional profile of the student, experience from scientific work, topic of the dissertation in preparation, preliminary and final results.

Recommended literature

- a) Šonka, Hlaváč, Boyle: Image Processing, Analysis and Machine Vision. ThomsonEngineering, 2007
- b) Burger, Burge: Digital Image Processing (<http://www.imagingbook.com>)