

Purpose: Our purpose is to develop a new physics course integrated with radiology clinical content and practice to prepare radiology residents to take the new American Board of Radiology (ABR) diagnostic radiology exam that went into effect on July 2010.

Methods: Our old physics course was taught over a period of one year, and consisted mainly of lectures taught from an imaging physics textbook. We now offer a two year course that primarily uses the RSNA/AAPM physics modules supplemented with other resources such as the AAPM physics curriculum and AAPM/RSNA physics tutorials. Various physics topics will be discussed in a non-serial order so that the residents develop an understanding of a breadth of topics in the first year. Each class session requires assigned reading or review before class. During class, we focus on important and relevant concepts from the assigned reading. We meet with the residents every other week and have one scheduled clinical lecture a month. The clinical lecture may come in the form of a radiologist teaching physics with emphasis on clinical relevance, a lab demonstrating physics concepts, a show and tell of radiology equipment, or a guest speaker from another institution. We are using audience response systems to encourage participation and discussion, and using tag-team teaching to generate interest and discuss clinically relevant questions and answers. We have also redesigned the physics course website to make it more user-friendly.

Results: We don't know yet. Only time and the success of our residents taking the board exam in 2013 will demonstrate whether the new format is working.

Conclusions: We anticipate that the new format will work, but this is only possible providing time and effort is expended by physicists in making changes to the old teaching methods to benefit the residents and the radiology community as a whole.