

ADVANCED RADIATION PHYSICS INC.

2888 NW 30th Street, Boca Raton, FL 33434; Phone: 561-789-6642

Shielding Techniques and Commissioning

Course fee:

- \$900.00
- A non-refundable fee of \$500 is required
- \$100 discount per course for Veterans and Military personnel.
- \$100 discount per person for a group of 4 or more.
- Remaining balance due two weeks before the class starts
- Use PayPal or send check to:

Advanced Radiation Physics Inc.

2888 NW 30th Street
Boca Raton, FL 33433-2432

- Send registration form by email to registration@thearpi.com

Course fee will include:

- Weekly class: 5:30 PM to 8:00 PM
- Binder, CD, or electronic file with the course material
- Class offered online via webinar
- Study group organized from the first day of the course, with proposed structured schedule.

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Course details:

- Webinars offered at weekly
- You can hear all of us, see the teacher and the presentation constantly during the webinar
- Webinars are recorded and you can have them and listen as many times as you wish.
- Chat and documents will be shared by all the attendants from the first class of the year till the last one of the same year

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Texts:

- *Shielding Techniques*, Patton H. McGinley;
- NCRP 151 & 49
- User manuals: *Eclipse*, *BrainLab*, *Oncentra*, *Variseed*, *Cyberknife*, and *Tomotherapy*

Course description:

- A course covering the science of opening a new radiation oncology center: covers shielding calculations, installing and running the acceptance testing of a linear accelerator, High dose rate brachytherapy remote afterloader, CT simulator, and treatment planning systems. Also it will cover the commissioning of the treatment planning systems.

Course objectives:

- At the end of this course the students should have a good understanding of the details in shielding calculations for a linear accelerator vault, HDR suite, and CT simulator, involving cost effective decisions while the radiation protection is ensured at a maximum level. At the same time the student will learn how to commission a treatment planning system, and the record and verify network.

Course outline:

- Week 1: Dose equivalent and effective dose
- Week 2: Planning a radiation oncology site
- Week 3: Placing the offices, hot lab, vaults, exam rooms, and treatment console with maximum radiation protection
- Week 4: Equipment section and acquisition for each room
- Week 5: Quality assurance program for all equipment
- Week 6: Planning a vault for a linear dual energy accelerator
- Week 7: Preparing the documentation for DOH approval of site
- Week 8: Calculating shielding for a mono and dual energy linac
- Week 9: Calculating shielding for a CT simulator
- Week 10: Shielding calculations for a brachytherapy suite and the hotlab
- Week 11: Beam data collection for the treatment planning system

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- Week 12: Beam data modeling
- Week 13: Treatment planning systems, commissioning
- Week 14: Surveys and documentation post commissioning
- Week 15: Final documentation of acceptance submitted to DOH

Silvia Pella, PhD, DABR

President & CEO of Advanced Radiation Physics Inc.

Affiliate Research Professor, Florida Atlantic University