

**Regional Training Course on Quality Assurance of Physical and Technical Aspects in Radiotherapy,  
Argonne National Lab, USA  
September 12 – 23, 2011**

Schedule Week 1: September 12 – 23, 2011

| Day Time    | Monday<br>September 12   | Tuesday<br>September 13  | Wednesday<br>September 14   | Thursday<br>September 15                    | Friday<br>September 16   | Saturday<br>September 17  | Sunday<br>September 18   |
|-------------|--|--|---|---|--|---|--|
| 9:00-10:00  | Opening Ceremony<br>Intro. To Rad<br>Therapy Process<br>(JFA)<br>The need for QA<br>(WFH)<br><b>10:00 – 10:30</b><br><b>(Safety)</b> | Photon Interactions,<br>Charged Particle<br>Interactions<br>Electron Interactions<br>(Will Hanson) | Cavity Theory<br>Radiation Dosimeters<br>Calibration of Photon and<br>Electron Beams<br>Standards, Traceability<br>TRS-277, TRS-398<br><br>(Saiful Huq) | Electron Beam Dosimetry<br><br>(J. Antolak) | Acceptance Testing<br><br>(G. Ibbott)  | Labs at Northwest<br>Community Hospital<br>Cobalt Lab= “Dry Lab”<br>Group A: HDR/LDR<br>GroupB:Photons/Cobalt<br>Group C: Electron<br>(F. Aguirre)<br>(P. Alvarez, P. Balter) | Labs at Northwest<br>Community Hospital<br><br>Electrons, HDR/LDR<br>Photons/Cobalt<br>(F. Aguirre)<br>(P. Alvarez, P. Balter) |
| 10:30-10:45 | <b>Group Photo</b>   |  |   |   |  |   |  |
|             | <b>Coffee/Tea Break</b>  |  |   |   |  |   |  |
| 10:45-12:00 | Basics-decay,<br>Atomic & Nuclear<br>Structure, Prod. of X-<br>Rays, Interactions,<br>dependence on E & Z<br>coefficients            | Continued<br>(Will Hanson)   | Continued<br>( Saiful Huq )   | Continued                                   | Continued  | Continued   | Continued  |
| 12:00-1:00  | <b>Lunch Break</b>   |  |   |   |  |   |  |
| 1:00-3:00   | Introduction,<br>Quantities and units,<br>Atomic & Nuclear<br>Structure,<br>Exponential<br>behavior, Prod. Of<br>X-Rays              | Dosimetric Quantities<br>(Will Hanson)   | Continued<br>( Saiful Huq )   | Photon Beam Dosimetry<br><br>(M. Salehpour) | Commissioning RT<br>equipment<br><br>Physics Dosimetry<br>Equipment<br><br>(G. Ibbott) | Continued   | Free   |
| 3:15-3:30   | <b>Coffee/Tea Break</b>  |  |   |   |  |   |  |
| 3:30-5:00   | Continued<br>(Will Hanson)   | Continued<br>(Will Hanson)   | Continued<br>( Saiful Huq )   | Continued                                   | Commissioning<br>Treatment Planning<br>Systems<br>mu calculations<br>(G. Ibbott)       | Continued   | Free   |

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Schedule Week 2: September 12 – 23, 2011

| Day<br>Time | Monday<br>September 19   | Tuesday<br>September 20                                     | Wednesday<br>September 21  | Thursday<br>September 22             | Friday<br>September 23                          |
|-------------|--|---|--|--------------------------------------|---|
| 9:00-10:30  | Conformal RT, IMRT<br>(M. Palisca)   | Brachy: Sources, Calib,<br>Commissioning<br><br>(Thomadsen) | Radiation Therapy Imaging<br>Equipment Simulation<br>Immobilization, Mold Room<br>Techniques<br><br>(J. Van Dyk) | Radiobiology<br><br>(D. Followill, ) | Exam, Evaluation<br><br>(F. Aguirre, W. Hanson) |
| 10:30-10:45 | <b>Coffee/Tea Break</b>  |   |  |                                      |   |
| 10:45-12:00 | Conformal RT, IMRT<br>Transitioning from 1D to 2D to<br>3D<br>(M. Palisca) | Continued   | Continued  | Radiation Accidents<br>(F. Aguirre)  | Continued                                       |
| 12:00-1:00  | <b>Lunch Break</b>   |   |  |                                      |   |
| 1:00-2:00   | Special Procedures<br>(TBI, TSE, SRS)<br>(P. Balter)                       | Brachy: Treatment<br>Planning<br><br>(Thomadsen)            | Quality Assurance<br><br>(D. Followill, )  | Radiation Safety<br>(R. Kudchaker)   | Exam Discussion<br>(W. Hanson)                  |
| 2:00-3:00   |  |   |  |                                      | Course Closing                                  |
| 3:15- 3:30  | <b>Coffee/Tea Break</b>  |   |  |                                      |   |
| 3:30-5:00   | QA of Imaging Equipment for<br>RT<br>(P. Balter)                           | Continued   | Orthovoltage Dry Lab<br><br>(D. Followill, F. Aguirre)<br>(cont'd)   | Q & A Review<br><br>(W. Hanson)      |   |