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Hazmiyeh,  
**LEBANON**



# DIGITAL X-RAY | 03 - 04 March 2018

Approved by the ASRT, American Society of Radiologic Technologists, as category A Continuing Education Credit (15.5 CE)

## DETAILS



### Topics Covered

- Optimize the transition from analog to digital
- Prevent abuses in handling new tools
- Optimize dose to image quality
- Skills evolution



### Registration Details

For info about registration please send an e-mail to :  
**cme@medical-professionals.com**  
Or call: **+961 1 974 800 ext.209** or **+961 3 10 46 13**

**Date:** Saturday 03 & Sunday 04 March, 2018

**Location:** Lancaster Tamar Hotel - Hazmiyeh, Lebanon



### Target Audience

- Technologist
- Radiology Resident
- Radiologist



### Course Deliverables

- Certificate of Completion
- 3 months free e-learning access
- Lunch + 2 coffee breaks

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## PROGRAM/ SCHEDULE (DAY 1 - DAY 2)

### DAY 1 (Digital X-ray Technology)

09:00   10:30	<b>Introduction:</b> <ul style="list-style-type: none"> <li>• Analog/ Digital image</li> <li>• X rays</li> <li>• Quantum mechanics: Wave-Particle Duality</li> </ul> <b>Physical principles:</b> Imaging chain and X-ray tube	14:45   16:00	<b>Image Intensifier Imaging Plate Flat Panel Detector</b>
10:30   10:45	<b>Break</b>	16:00   17:30	<b>Image Resolution:</b> <ul style="list-style-type: none"> <li>• Contrast Resolution</li> <li>• Density Resolution</li> <li>• Spatial Resolution</li> <li>• Modulation Transfer Function Detective Quantum Efficiency</li> </ul> <b>Quiz (15 minutes)</b>
10:45   12:30	<b>Physical principles:</b> <ul style="list-style-type: none"> <li>• Power of an X ray tube</li> <li>• Acquisition parameters</li> <li>• Radiation-Patient Interaction</li> </ul> <b>Fields of applications:</b> <ul style="list-style-type: none"> <li>• Department of radiology</li> <li>• Some applications</li> <li>• Activity sectors</li> </ul>		
12:30   13:30	<b>Lunch</b>		
13:30   14:30	<b>Radiation Protection Radiographic Techniques</b>		
14:30   14:45	<b>Break</b>		

### DAY 2 (Digital X-ray Applications)

09:00   10:30	<b>Image quality:</b> <ul style="list-style-type: none"> <li>• Acquisition parameters</li> <li>• Exposure Index</li> <li>• Signal to noise ratio</li> <li>• Contrast to noise ratio</li> <li>• Geometric factors</li> <li>• Windowing</li> <li>• Artifacts</li> </ul>	13:30   14:30	<b>Applications:</b> <ul style="list-style-type: none"> <li>• Thoracic spine x ray</li> <li>• Pangenogram</li> <li>• Contrast agent</li> <li>• Arthrography</li> <li>• CT an MR arthrography</li> <li>• Injections</li> <li>• Angiography</li> <li>• Li-Fi (Light Fidelity)</li> </ul>
10:30   10:45	<b>Break</b>	14:30   14:45	<b>Break</b>
10:45   12:30	<b>Applications:</b> <ul style="list-style-type: none"> <li>• Mammography</li> <li>• Tomosynthesis or 3D mammography</li> <li>• Dental radiography</li> <li>• Le bilan long cone</li> <li>• Cone beam CT</li> <li>• Bone densitometry</li> <li>• EOS imaging</li> <li>• Dual energy</li> </ul>	14:45   16:00	<b>Practical Applications:</b> <ul style="list-style-type: none"> <li>• Radiology room</li> <li>• Medical exposure</li> <li>• Guide to Rational Use</li> <li>• Dose optimization</li> <li>• Image quality optimization</li> <li>• Optimization of the visualization</li> </ul>
12:30   13:30	<b>Lunch</b>	16:00   17:30	<b>Practical Applications:</b> <ul style="list-style-type: none"> <li>• Measurements</li> <li>• Radiological signs</li> <li>• Some pathologies</li> </ul> <b>Quiz (15 minutes)</b>

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