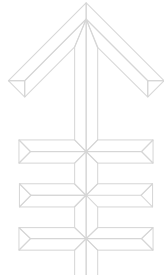


Memorial Sloan Kettering
Cancer Center

Using Digital Training Tools to Address Resident Training During a Pandemic


July 25, 2021
Christopher J. Watchman, PhD, DABR
AAPM Annual Meeting 2021
Education Council Symposium



1

Disclosures

- None




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MSK PANDEMIC EXPERIENCE


Date	Events
3/4/20	All business travel suspended
3/6/20	Planning for remotework underway
3/13/20	Faculty/Staff not directly involved in clinical frontline delivery begin remote working All residents set to work remotely from home
3/16/20	Tier 1 adaptation - minimal on-site with faculty/staff in alternating teams (A/B)
3/17/20	Tier 2 adaptation - skeleton crew on-site (1 physicist, 1 dosimetrist) Began remote setups OSLD measurements transferred to therapists instead of physicists Machine QA only time residents were allowed to be on-site
3/20/20	Governor closes all non-essential business
6/17/20	GME office approved resident education as "essential" for on-site work
8/1/20	Resumption of "elective" surgery
8/5/20	Resident on brachytherapy rotation able to be on-site for clinical activities
12/31/20	Residents working mixed remote/on-site



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Society Resources



Medical and Scientific
Journals, Practice
Guidelines, Reports

Video and eLearning
content

4

The AAPM Online Learning Center (OLC) is a repository of continuing education materials to be used by individuals to continue the professional development.

One valuable feature of the OLC is the [AAPM Virtual Library](#), which includes:

- Streaming video and/or audio of the presentation slides captured at various AAPM meetings.
- Downloadable presentation slides.
- Audio of the presentation.

Access to the Virtual Library is included in AAPM membership. At completion of an available Virtual Library presentation, a certificate is issued.

Additionally, within the OLC and for an annual fee, individuals can access a variety of materials and content associated with a variety of topics such as AAPM Approved Medical Physics Continuing Education (AAPM-APPE) and AAPM approved AAPM equipment (AAPM-APPE).

Online Education Credits Program
(Also known as Online Continuing Education Program)
(Approved for AAPM members only)

	AAPM New Members	AAPM New Members
Students	\$10	\$10
Resident and Junior	\$10	\$10
Resident, Resident Associate, Corresponding, Professional Affairs and	\$40	\$40
International Affairs	\$40	\$40
Continuing Education	\$10	\$10

Join the thousands of other AAPM members who are using the Online Learning Center for their continuing education, research, and information needs.

Message from the Chair
Online Learning Services Subcommittee

The OLC is maintained by the Online Learning Services Subcommittee (OLSS) and AAPM staff. Please visit the OLC at <https://www.aapm.org/education/VL/> for more information on the OLC and the AAPM Virtual Library. Program materials are provided and maintained by members and the OLC staff. A multiple choice question is provided for each presentation.

Currently, there are more than 1000 slides that can be used for AAPM-APPE. 1 OLC credit is earned for each slide. The OLC staff will be working to update the OLC with new presentations and to make the OLC a more user-friendly environment. The OLC staff will be working to update the OLC with new presentations and to make the OLC a more user-friendly environment. The OLC staff will be working to update the OLC with new presentations and to make the OLC a more user-friendly environment.

Search the virtual library:

By Title: Submit

By Presenter: Submit

Browse the virtual library:

- by Content Area
- by a comprehensive list of all videos
- by choosing a tab below

Virtual Library Presentations
NOW AVAILABLE

- 2020 Joint AAPM/CCMP Meeting - Virtual
- AAPM Spring Clinical Meeting - Virtual - 2020
- 21st AAPM Annual Meeting - San Antonio, TX - 2019
- AAPM Summer School - Burlington, VT - 2019
- AAPM Spring Clinical Meeting - Kissimmee, FL - 2019
- AAPM Training at CROD - Anchorage, AK - 2019

<https://www.aapm.org/education/ce/info.asp>

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RSNA Online Learning Center

DASHBOARD CATALOG MY LEARNING

Browse by > Physics Module

0 Item(s)

Search

I'm looking for...

Search Clear

Filter By:

Physics Module Content Area

Additional Credit Types and Languages Anatomy (not listed on certificate)

Modality (not listed on certificate) Patient Population (not listed on certificate)

<https://education.rsna.org/diweb/catalog/t/10791>

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<https://humanhealth.iaea.org/HHW/MedicalPhysics/index.html>

IAEA Human Health Campus

Home Nuclear Medicine Radiopharmacy Radiation Oncology Medical Physics Technologists Nutrition

Dosimetry and Medical Physics

Radiotherapy Diagnostic Radiology Nuclear Medicine

The Medical Physicist Training Events E-learning

Shortcuts Latest Events Links General Public Information Databases & Statistics IAEA Publications

International Medical Physics Certification Board IAEA references

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<https://humanhealth.iaea.org/HHW/MedicalPhysics/index.html>

IAEA Human Health Campus

E-learning

e-learning module IAEA TRS483 Code of Practice on Dosimetry of Small Static Fields Used in External Beam Radiotherapy

IAEA e-learning module

Audiofiles - Roles and Responsibilities of a Clinically Qualified Medical Physicist

Quality Assurance e-learning module for SPECT systems

Tutorial videos for Quality Control tests on PET/CT scanners

Train the Trainers Workshop on Medical Physics Support for Nuclear or Radiological Emergencies

Video Tutorial to Determine the Absorbed Dose to Water for High Energy Proton Beams

TLD Irradiation Tutorial for participants in the IAEA/WHO Postal Dose Audit

IAEA support to Medical Physics Videoslides

Nuclear Medicine Handbook slides

Diagnostic Radiology Handbook slides

Radiation Oncology Handbook slides

International Conference on Advances in Radiation Oncology (ICARO) 2017

Slides and presentations from IDOS 2019

Nuclear Medicine Physics on-line seminars

Transitioning from 2-D Radiation Therapy to 3-D Conformal Radiation Therapy and Intensity Modulated Radiation Therapy

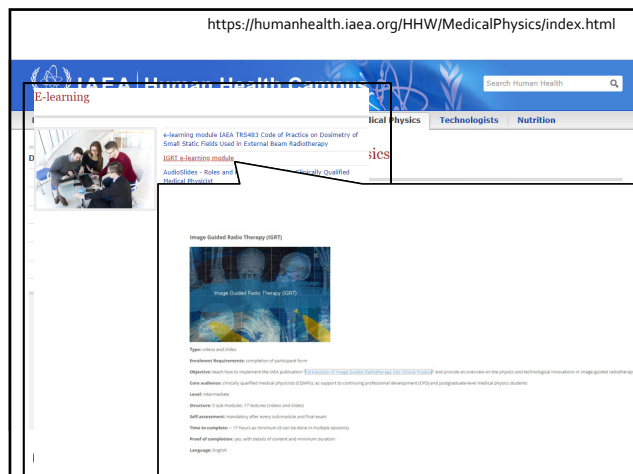
Other resources: Video presentation on EHERALD-EHER, Medical Physics online multilingual dictionary, MPP Journal

Material from IDOS 2019

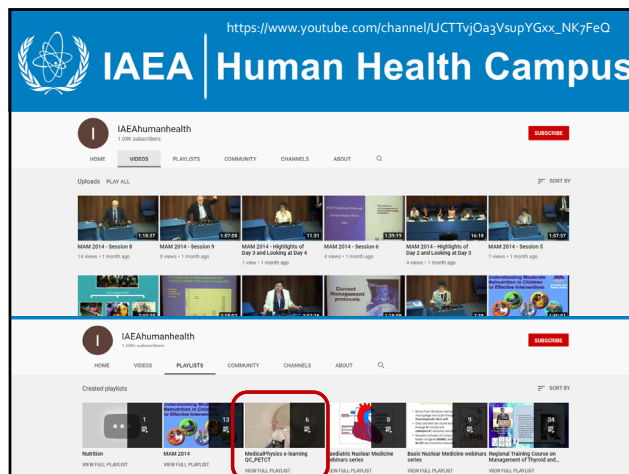
Acceptance of a New Source in HDR Brachytherapy

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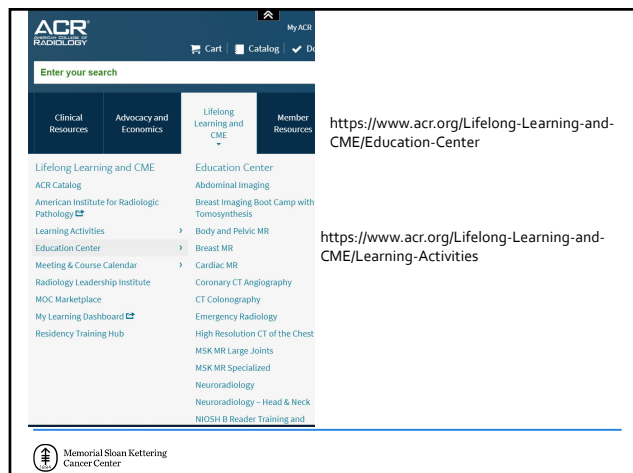
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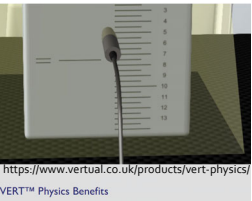


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Other Digital Tools/Resources



Tutorial 1 - Eclipse Overview
<https://vimeo.com/218638947>





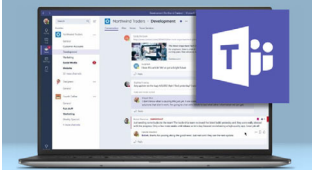
VERT™ Physics Benefits
<https://www.virtual.co.uk/products/vert-physics/>
<https://linax.ca/>



SIMAC is a web-based linear accelerator learning and treatment with on-line dosimetry, target simulation, data and utilities.

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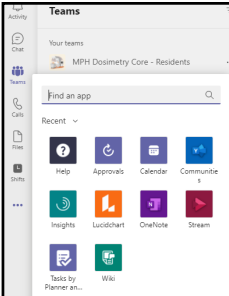
MS Team Environment

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MS Team Environment



Teams
 Your teams
 MPH Dosimetry Core - Residents

Find an app

Recent

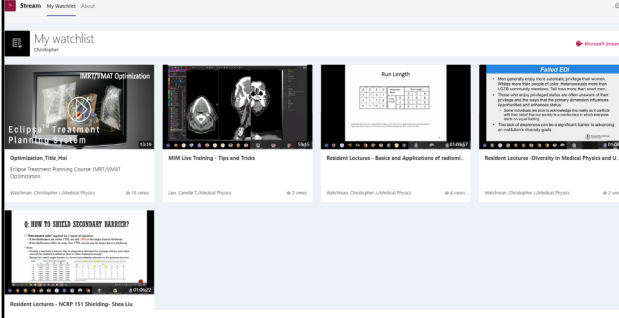
- Help
- Approvals
- Calendar
- Communities
- Insights
- Lucidchart
- OneNote
- Stream
- Tasks by Planner
- Wiki

Apps

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MS Team Environment



Stream
 My Watchlist

My watchlist

- Eclipse Treatment Planning Course (ARE/OSAT) Optimization, Title: M1
- MM Line Training - Tips and Tricks
- Resident Lectures - Basics and Applications of radiol...
- Resident Lectures - Diversity in Medical Physics and U...

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MS Team Environment

The screenshot shows the 'General' document library in a SharePoint environment. The table lists various documents and folders, including 'archive_meetings', 'Forms', 'PhotosForWebsite', 'Policy and Procedures', 'Rotation Syllabi', 'Camera and Headset Information.xlsx', 'helpful info.docx', 'Meeting Agenda - (May 2021).docx', 'One_One Monthly meeting May 2021.docx', 'Resident Lectures Series Jan-Dec 2021.xlsx', 'Things_to_arrange_at_start_of_Therapy_clinical_rotations.docx', and 'Weekly TG Report Review 2021.xlsx'.

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Topical Lectures and In-service Training

The screenshot shows the 'Videos' section of the 'Topical Lectures and In-service Training' site. It lists several task group review sessions and a grantmanship session. To the right, there is a presentation slide titled 'TP In-Service: IMR and Gating Simulation'.

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Topical Lectures and In-service Training

The screenshot shows the 'Documents' section of the 'Topical Lectures and In-service Training' site. It lists various documents, including '4DCT PHASE BINNING', 'AlignRT', 'Belus', 'Brain - Hippo and SRS', 'Breast Planning', 'Collision Check and KV Guide', 'CSI', 'DBH', 'ECHO', 'EucTrec', 'Extremity', 'GATING SIM', 'gUD', 'Gr Abative', 'Head and Neck', 'IMR', 'IMM', 'IMW', 'Non-Plan_Hand-Calcs', 'Paraspinal', 'POD', 'Prior Treatment Review', 'Prostate EBTP', 'Python Bootcamp', 'RNA Resources', 'SETUP CHECKS', 'SPOC', and 'TSEB and TB - Special Procedure'.

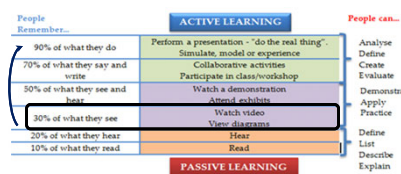
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MSK eLearning Training

- Video based training
- eLearning tools

– Integrate

- Video
- Quizzing
- Active learning



20

eLearning Software

- Four components
 - eLearning authoring software
 - Learning Management System (LMS)
 - Video development tools
 - Camera/phone
 - Video editing software
 - Audio tools
 - Microphone
 - Sound engineering software

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eLearning Authoring Software

- | | | |
|----------|-------------------------------|---|
| | • Elucidat | https://www.elucidat.com/ |
| MSKCC MP | • Adobe Captivate | https://www.adobe.com/products/captivate.html |
| | • Articulate Storyline | https://articulate.com/perpetual/storyline-3 |
| | • Articulate Rise | https://articulate.com/360/rise |
| MSKCC HR | • Storyboard | https://www.storyboardthat.com/ |
| | • Gomo | https://www.gomolearning.com/ |
| | • Lectora | https://www.elearningbrothers.com/create-learning/lectora |
| | • Adapt | https://www.adaptlearning.org/ |
| | • DominKnow | https://www.dominknow.com/ |
| | • Easygenerator | https://www.easygenerator.com/en/ |
| | • iSpring | https://www.ispringsolutions.com/ |
| | • Evolve | https://evolveelearning.com/ |
| | • Brainshark | https://www.elearninglearning.com/brainshark/ |

22

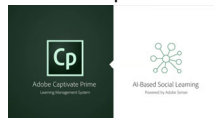
eLearning LMS Software

- MyLearning Saba

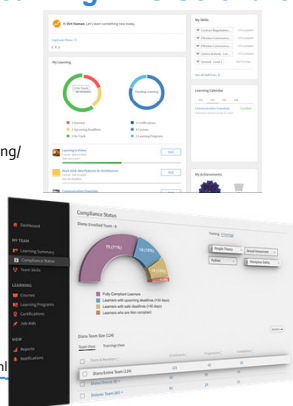


<https://www.cornerstoneondemand.com/learning/>

- Adobe Captivate Prime



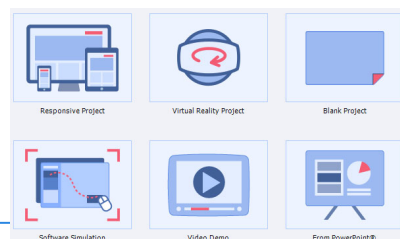
<https://www.adobe.com/products/captivateprime.html>



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eLearning Course Options

- PowerPoint Conversion
- 360 virtual reality video interaction
- Software Simulations
- Videos
 - Demos
 - Lectures



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Video Training

Eclipse Treatment Planning System Training Course

Video Training & Quizzing

MIM Maestro Video Training Course

Video Training and Software Simulation

Introduction to the ARJA Prescription

Quizzing and Software Interaction

MIM Maestro Clinical Competency Examination

Video Training w/ Practice Example Problems

MSKCC MU Calculation Training Course

Video Instructor: Chi Huang

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Future Training Tools

Integrated resident teaching and training

- Adaptive problem based scenarios
- High risk and pressure training without patient or equipment risk

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**Questions?
Panel
Discussion...**

Email: watchmac@mskcc.org

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