



UCI Department of Radiation Oncology

Sample UC Irvine Medical Dosimetry Program Official Transcript

TIME		DIDACTIC					PRACTICAL					
Month	Week	Subject	Topics	Lecturer	Lecture Credits	Monthly Self-Study Credits	Self-Study Objectives	ROTATION	Supervisor	Practical Training Credits		
JUL 2016 R1	4-Jul	Radiobiology	No Lecture			Geom. & Trig. Review Assignment / Pt Immobilization & CT; Report at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	Introd. to the Department	Dosimetry Staff	10-20 (assuming 8-hr day / July 4th holiday)		
		Physics	Annual Radiation Safety In-Service	J. Gratzle, BS	2			UCI Patient Simulation Protocols	Sim Therapist			
		Clinical Lectures	TBA	TBA	1			Introduction to ECLIPSE	Dietrich/Gonzales/Roa			
					Introduction to MIM			Sehgal				
	11-Jul	Radiobiology	No Lecture						BRAIN: 3D-CRT Test Plans	Dietrich/Gonzales	35	
		Physics	Structure of Matter	M. Al-Ghazi, PhD	3							
		Clinical Lectures	TBA	TBA	1							
	18-Jul	Radiobiology	No Lecture									
		Physics	Radioactivity and X-Ray Production	M. Al-Ghazi, PhD	3				BRAIN: 3D-CRT Test Plans	Dietrich/Gonzales	35	
		Clinical lectures	TBA	TBA	1							
25-Jul	Radiobiology	No Lecture										
	Physics	Generation of X-Rays	M. Al-Ghazi, PhD	3		PELVIS: 3D-CRT Test Plans	Dietrich/Gonzales	35				
	Clinical Lectures	TBA	TBA	1								
July 2016 - Evaluation				DIDACTIC - Meets Expectations			PRACTICAL - Meets Expectations					
AUG R2	1-Aug	Radiobiology	No Lecture			TG-114 MU Calculations / MU Calculation Problems; Evaluation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	PELVIS: 3D-CRT Test Plans	Dietrich/Gonzales	35		
		Physics	Interaction of Radiation w/ Matter I/II	M. Al-Ghazi, PhD	3							
		Clinical Lectures	TBA	TBA	1							
	8-Aug	Radiobiology	No Lecture									
		Physics	Clinical Radiation Generators	M. Al-Ghazi, PhD	3				CHEST/ABDOMEN: 3D-CRT Test Plans	Dietrich/Gonzales	35	
		Clinical Lectures	TBA	TBA	1							
	15-Aug	Mock Orals - No Lectures							CHEST/ABDOMEN: 3D-CRT Test Plans	Dietrich/Gonzales	35	
	22-Aug	Radiobiology	No Lecture									
		Physics	Clinical Radiation Generators (cont')	M. Al-Ghazi, PhD	3				H&N: 3D-CRT Test Plans	Dietrich/Gonzales	35	
		Clinical Lectures	TBA	TBA	1							
August 2016 - Evaluation				DIDACTIC - Meets Expectations			PRACTICAL - Meets Expectations					
29-Aug	29-Aug	Radiobiology	Overview course: Interactions of Ionizing radiation with biological systems & DNA damage types and assays	C. Limoli, PhD	1		20-30 (assuming	H&N: 3D-CRT Test Plans	Dietrich/Gonzales	35		
		Physics	Quality of X-Ray Beams	M. Al-Ghazi, PhD	3							
		Clinical Lectures	TBA	TBA	1							
	5-Sep	Radiobiology	Molecular DNA repair	C. Limoli, PhD	1							
		Physics	Measurement of Ionizing Radiation	M. Al-Ghazi, PhD	3				BRAIN: IMRT Test Plans	Roa	35	
		Clinical Lectures	TBA	TBA	1							

SEP R3	12-Sep	Mock Orals - No Lectures			TG-51 - Practical Application; Presentation at the end of the month	1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	BRAIN: IMRT/VMAT Test Plans	Dietrich/Gonzales/Roa	35	
	19-Sep	Radiobiology	Apoptosis	C. Limoli, PhD			1	PELVIS: IMRT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	Meas. and Calc. of Absorbed Dose I	M. Al-Ghazi, PhD			3			
	Clinical Lectures	TBA	TBA	1			PELVIS: IMRT Test Plans	Dietrich/Gonzales/Roa	35	
26-Sep	ASTRO - No Lectures									
September 2016 - Evaluation					DIDACTIC - Meets Expectations		PRACTICAL - Meets Expectations			
OCT R4	3-Oct	Radiobiology	Survival Curves & Cell Death Mechanisms - Chromosome	C. Limoli, PhD	1	TG-119 Treatment Planning and QA; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	PELVIS: IMRT/VMAT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	Meas. And Calc. of Absorbed Dose II	M. Al-Ghazi, PhD	3			CHEST/ABDOMEN: IMRT Test Plans	Dietrich/Gonzales/Roa	35
		Clinical lectures	TBA	TBA	1					
	10-Oct	Radiobiology	LET, RBE, OER (#7) Cellular repair (PLDR, SLDR), dose rate effects	C. Limoli, PhD	1			CHEST/ABDOMEN: IMRT/VMAT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	Meas. And Calc. of Absorbed Dose III	M. Al-Ghazi, PhD	3					
		Chief rounds	TBA	TBA	1					
	17-Oct	Radiobiology	No lecture					CHEST/ABDOMEN: IMRT/VMAT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	No Lecture							
		Clinical lectures	TBA	TBA	1					
	24-Oct	Radiobiology	A/B Ratios - Dose Fraction	C. Limoli, PhD	1			CHEST/ABDOMEN: VMAT Test Plans	Dietrich/Braggins/Roa	35
Physics		Dose Distribution and Scatter Analysis I	M. Al-Ghazi, PhD	3						
Clinical lectures		TBA	TBA	1						
October 2016 - Evaluation					DIDACTIC - Meets Expectations		PRACTICAL - Meets Expectations			
NOV R5	31-Oct	Radiobiology	Normal Tissue Damage & Tumor Response	TBA	1	ICRU 50, 62 & 83 Study	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively)	H&N: IMRT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	Dose Distribution and Scatter Analysis II	M. Al-Ghazi, PhD	3			H&N: IMRT/VMAT Test Plans	Dietrich/Gonzales/Roa	35
		Clinical lectures	TBA	TBA	1					
	7-Nov	Radiobiology	Hypoxia, angiogenesis & tumor microenvironment	C. Limoli, Ph.D.	1			H&N: VMAT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	Treatment Planning: A System of Dosimetric Calculations	M. Al-Ghazi, PhD	3					
		Clinical lectures	TBA	TBA	1					
	14-Nov	Radiobiology	Cell cycle and tissue kinetics - Cell cycle repair	C. Limoli, PhD	1			H&N: VMAT Test Plans	Dietrich/Gonzales/Roa	35
		Physics	Treatment Planning: Patient Setup and Treatment Aids	M. Al-Ghazi, PhD	3					
		Clinical lectures	TBA	TBA	1					
	11/21 thru 11/23	Thanksgiving Holiday								H&N: VMAT Test Plans
28-Nov	Radiobiology	Targeted Therapy / Chemotherapy	M. Acharya, PhD	1	Report / Presentation at the end of the month	H&N: VMAT Test Plans	Dietrich/Gonzales/Sehgal	35		
	Physics	Treatment Planning: Patient Setup and Treatment Aids (con't)	M. Al-Ghazi, PhD	3						
	Clinical lectures	TBA	TBA	1						

		November 2016 - Evaluation			DIDACTIC - Meets Expectations			PRACTICAL - Meets Expectations		
DEC R6	5-Dec	Radiobiology	Signaling, Molecular Biology, Radiation Units, Radiation Effects and the Human	C. Limoli, PhD	1	QUANTEC Practical Application; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	HDR: Cylinder / Capri Test Plans	Dietrich/Gonzales /Sehgal	35
		Physics	Treatment Planning: Inhomogeneity Correction Methods	M. Al-Ghazi, PhD.	3					
		Clinical lectures	TBA	TBA	1					
	12-Dec	Radiobiology	Research Overview	M. Acharya, PhD	1					
		Physics	Measurement and calculation of Absorbed Dose III	M. Al-Ghazi, PhD	3					
	12/19 thru 12/22	Chief rounds	TBA	TBA	1			Christmas Break		
12/26 thru 12/29	Christmas Break					HDR: Biliary Test Plans	Dietrich/Gonzales /Sehgal	32		
		December 2016 - Evaluation			DIDACTIC - Meets Expectations			PRACTICAL - Meets Expectations		
JAN 2017 R7	2-Jan	Radiobiology	Course Review	C. Limoli, PhD	1	TBI / TSEI Study; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	Limb Melanoma / Sarcoma (EXTREMITIES)	Dietrich/Gonzales	35
		Physics	ICRU 30, 62 & 62. Dose Prescription and Reporting	M. Al-Ghazi, PhD	3					
		Clinical lectures	TBA	TBA	1					
	9-Jan	Radiobiology	Course Review	M. Acharya, PhD	1					
		Physics	ICRU 30, 62 & 62. Dose Prescription and Reporting (cont)	M. Al-Ghazi, PhD	3					
	16-Jan	Physics	N/A							
		Clinical lectures	Simulation, CT Simulation & virtual Simulation	M. Al-Ghazi, PhD	3					
23-Jan	Physics	Electron Beams I: Principles, Interactions and Dosimetry	V. Sehgal, PhD.	3						
	Clinical lectures	TBA	TBA	1						
		January 2017 - Evaluation			DIDACTIC - Meets Expectations			PRACTICAL - Meets Expectations		
FEB R8	30-Jan	Physics	Electron Beams II: Clinical Applications	V. Sehgal, PhD	3	Fetal Dose Study; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	CLINICAL TREATMENT PLANNING ANY SITE, ANY TECHNIQUE	RAD. ONCOLOGISTS MED. PHYSICISTS	35-hr per week working as a Medical Dosimetrist but under supervision.
		Chief Rounds	TBA	TBA	1					
	6-Feb	Physics	Electron Beams III: Treatment Planning	V. Sehgal, PhD	3					
		Clinical Lectures	TBA	TBA	1					
	13-Feb	Physics	Large Field Radiotherapy: WAI, HBI TBI, TSET	V. Sehgal, PhD	4					
		Clinical Lectures	TBA	TBA	1					
	20-Feb	Physics	Brachytherapy I: Principles and Sources	V. Sehgal, Ph.D	3					
		Clinical Lectures	TBA	TBA	1					
		February 2017 - Evaluation			DIDACTIC - Meets Expectations			PRACTICAL - Meets Expectations		
	27-Feb	MDCB/ACR IN-TRAINING EXAM			PASSED	4				

MAR R9	6-Mar	Physics	Brachytherapy II: Systems of Dose Calculations	V. Sehgal, PhD	3	SRS / SBRT Practical; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	CLINICAL TREATMENT PLANNING ANY SITE, ANY TECHNIQUE	RAD. ONCOLOGISTS MED. PHYSICISTS	35-hr per week working as a Medical Dosimetrist but under supervision.						
		Clinical Lectures	TBA	TBA	1											
	13-Mar															
		Physics Lectures	Brachytherapy III: Treatment Planning and Clinical Applications	V. Sehgal, PhD	3											
	20-Mar															
		Physics Lectures	Techniques and HDR	V. Sehgal, PhD	3											
	27-Mar															
		Physics Lectures	Review	V. Sehgal, PhD	3											
	Estimated Monthly Clock Hours		DIDACTIC - Meets Expectations								PRACTICAL - Meets Expectations					
	APR R10	3-Apr	Physics	Quality Assurance in Radiotherapy I	D. Roa, PhD						3	Permanent Seed Implant Study; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	CLINICAL TREATMENT PLANNING ANY SITE, ANY TECHNIQUE	RAD. ONCOLOGISTS MED. PHYSICISTS	35-hr per week working as a Medical Dosimetrist but under supervision.
Clinical Lectures			TBA	TBA	1											
10-Apr		MDCB MOCK EXAM #1		PASSED	4											
		Physics	Quality assurance of Radiotherapy II	D. Roa, PhD	3											
17-Apr																
		Physics Lectures	Radiation Protection	D. Roa, PhD	3											
24-Apr																
		Physics Lectures	Conformal Therapy (3DCRT, IMRT, VMAT & Related Modalities)	D. Roa, PhD	3											
Estimated Monthly Clock Hours		DIDACTIC - Meets Expectations				PRACTICAL - Meets Expectations										
MAY R11		1-May	Physics	RAPHEX EXAM	PASSED	4	LDR, MDR & IORT Study; Report / Presentation at the end of the month	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	CLINICAL TREATMENT PLANNING ANY SITE, ANY TECHNIQUE	RAD. ONCOLOGISTS MED. PHYSICISTS	35-hr per week working as a Medical Dosimetrist but under supervision.					
	8-May	Physics	Fundamentals of Computers / Review	D. Roa, PhD	2											
		Clinical lectures	TBA	TBA	1											
	15-May	MDCB MOCK EXAM #2		PASSED	4											
		Physics	SRS/SBRT/SRT: Principles, Small Field Dosimetry, Instrumentation &	D. Roa, PhD	3											
	22-May															
		Physics	Review	D. Roa, PhD	2											
29-May																
Estimated Monthly Clock Hours		DIDACTIC - Meets Expectations				PRACTICAL - Meets Expectations										
	5-Jun	Radiobiology	RABEX EXAM	PASSED	4											

JUN R12	12-Jun	Physics	RAPHEX EXAM Review	M. Al-Ghazi, PhD	4	MDCB Code of Ethics & AAMD MDCB Scope of Practice; Report / Presentation at the end of the month - END OF TRAINING	20-30 (assuming 1 hrs daily for 5 or 7 days a week respectively, and outside work hours)	CLINICAL TREATMENT PLANNING ANY SITE, ANY TECHNIQUE	RAD. ONCOLOGISTS MED. PHYSICISTS	35-hr per week working as a Medical Dosimetrist but under supervision.
	19-Jun	Physics	RAPHEX EXAM Review	M. Al-Ghazi, PhD	4					
	26-Jun	MDCB MOCK EXAM #3		PASSED	4					
	Estimated Monthly Clock Hours			DIDACTIC - Meets Expectations						

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