

## Medical Physics 5170

Basic Radiological Physics  
 Fall Schedule: September 8 – December 22, 2020  
 Tuesdays and Thursdays: 4-5:15 pm  
 Class room: PWB 1-200A

Date	Day	Chapter		
9/7	<b>M</b>			<b>Labor Day</b>
9/8	T	1	YW	Structure of Matter
9/10	Th	2	YW	Nuclear Transformations
9/15	T	2	YW	Nuclear Transformations
9/17	Th	3	YW	Production of X-rays
9/22	T	3	YW	Production of X-rays
9/24	Th	4	YW	Clinical Radiation Generators
9/29	T	4	YW	Clinical Radiation Generators
10/1	Th	4	YW	Clinical Radiation Generators
10/6	T	4	YW	Clinical Radiation Generators
<b>10/8</b>	<b>Th</b>			<b>Mid-Term I</b>
10/13	T	5	DM	Interactions of X and $\gamma$ Radiation
10/15	Th	5	DM	Interactions of X and $\gamma$ Radiation
10/20	T	5	DM	Interactions of Charged Particles and Neutrons
10/22	Th	6	DM	Measurement of Ionizing Radiation
10/27	T	6	DM	Measurement of Ionizing Radiation
10/29	Th	7	CF	Quality of X-ray Beams
11/3	T	8	CF	Measurement and Calculation of Absorbed Dose
11/5	Th	8	CF	Measurement and Calculation of Absorbed Dose
11/10	T	8	CF	Measurement and Calculation of Absorbed Dose
<b>11/12</b>	<b>Th</b>			<b>Mid-Term II</b>
11/17	T	9	PA	Dose Distribution and Scatter Analysis
11/19	Th	9	PA	Dose Distribution and Scatter Analysis
11/24	T	9	PA	Dose Distribution and Scatter Analysis
11/26	Th			Thanksgiving holiday
12/1	T	10	PA	A System of Dosimetric Calculations
12/3	Th	10	PA	A System of Dosimetric Calculations
12/8	T	11	PA	Isodose Distributions
12/10	Th	11	PA	Isodose Distributions
12/15	T	11	PA	Isodose Distributions
12/17	Th			Review
<b>12/22</b>	<b>T</b>			<b>Final Exam</b>

**Lecturers:** Yoichi Watanabe\*, Ph.D. (YW), Parham Alaei, Ph.D. (PA), Damien Mathew, Ph.D. (DM), Clara Ferreira, Ph.D. (CF)

**Text:** Khan's The Physics of Radiation Therapy by Faiz M. Khan and John P. Gibbons, Wolters Kluwer, 5<sup>th</sup> Edition, 2014

\*Course Director