

Tentative Class Schedule: Summer 2018 Semester
NE 7313: Nuclear Science & Engineering for Secondary Science Teachers

	Monday, June 11	Tuesday, June 12	Wednesday, June 13	Thursday, June 14	Friday, June 15
Time / Location:	<i>Old Alumni Center</i>	<i>STC- NT RPT Labs</i>	<i>Old Alumni Center</i>	<i>Old Alumni Center</i>	<i>(Transit to Callaway)</i>
8:00 AM	Introduction, Registration, Review of Process for Teaching Unit Development / Submission for Class Grade	<i>Transit to STC – Linn, MO</i>	Dose Units and Population Dose (Miller)	Reactor Fundamentals - Miller	(Please check out from dorm prior to departure) Meet at the Callaway Learning Center (next to Training Center)
9:00	Welcome: MU Graduate School – Hart Video: "Radiation Naturally"	<u>LAB I</u> : GM tube Plateaus Cloud Chamber Demo (<i>Dry ice</i>)	Radiation Protection - Miller	Advanced Nuclear Power Plant Designs and Small Modular Reactors – Bond	Welcome and Overview 9:30 Emergency Preparedness and Fukushima Response
10:00	Welcome: MU Engineering - Salim	<u>LAB II</u> : Background Measurement	<i>Chernobyl Video</i>	Waste Management – Yucca Mountain and WIPP - Miller	9:45 Dry Cask Storage 10:15 Tour Safety Brief 10:30 Plant Tours
11:00	Radioactive Emissions & Decay	<u>LAB III</u> : Radiation Half-Life	Industrial Uses of Radiation 11:45 Intro to Medical Imaging and Treatment Modalities - Miller	<i>Transit to MURR</i> 11:30 Nuclear Accidents: Fukushima and Chernobyl – Graham <i>(Box lunches)</i>	
12:00 PM	<i>Lunch – Plaza 900</i>	<i>Lunch</i>	<i>Lunch / Population / Math Video</i>		Lunch
1:00	Radioactive Decay–Continued	Radiation Counting Statistics- <u>LAB IV</u> : Statistics	Radioisotopes in Biomedical Research - Hoffman	1:00 pm Group 1-Tour – Miller/Heitman Group 2–XRF - MacDonald Group 3 – NAA – Blumer et al	1:00 Simulator Tour
2:00	Math Fundamentals - Rates of Decay – Miller 2:30 Welcome: MU Education - Barrow	Interaction of Radiation with Matter <u>LAB V</u> : Inverse Square	2:30 – 3:30 Plant Sciences Ferrieri	2:00 pm <u>Group 1</u> –XRF - MacDonald d Group 2–NAA Blumer et al Group 3–Tour – Miller/Heitman	2:30 p.m. Course Evaluation / Q&A on Teaching Units / Other Closing Items - Miller
3:00	Big Bang to the Periodic Table - Speck	<u>LABVI</u> : Gamma-Ray Shielding	3:40 Depart for Ellis Fischel	3:00 pm Group 1 –NAA Blumer et al Group 2 -Tour –Miller/Heitman Group 3 –XRF - MacDonald	Class Adjourns
4:00	Radiation Interactions - Miller	<u>LAB VII</u> : Beta Attenuation & Thickness Gauging	Tour: Ellis Nuclear Medicine Clinics – Kennedy	4:00 pm Cyclotron Tour-Gahl 4:15 pm GM Kit Training, CD Meter / Source Coupon Distribution)	
6:30	Interactions, continued Miller's home			6:00 p.m. Les B. - Dinner w/Nuclear Professionals	