

## Atoms at Work Summer Camp

Date: June 19-23, 2023

### Emergency Contact:

True Miller (C): (317) 460-9633    Brian Jowers (C): (469) 781-0383

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### Monday, June 19, 2023

9:00 am – 9:30 am	Welcoming and initial introductions - Everyone	WALC 3121
9:30 am – 10:20 am	Introduction to radiation lecture – Chloe Yoder	WALC 3121
10:30 am – 11:20 am	Detector basics and shielding lecture - William Richards	WALC 3121
11:30 am – 12:10 pm	Faculty research presentation - Dr. Chatzidakis	WALC 3121
12:10 pm – 1:10 pm	Lunch Break	
1:15 pm – 2:15 pm	Reactor and NERL tour - True Miller, Alex Baker, Brian Jowers	BHEE B073
2:15 pm – 4:00 pm	Cloud chamber activity and measuring radiation lab, outside detector measurements - All student helpers	BHEE B073

### Tuesday, June 20, 2023

9:00 am – 9:50 am	Half-lives, Isotopes, cross-sections, and radiation interactions lecture - Riley Madden	WALC 3121
10:00 am – 10:50 am	Neutron Activation, source activity, gamma spectroscopy and nuclear fuel lecture - Riley Madden	WALC 3121
11:00 am – 12:00 pm	Revankar lab tour and laminar flow around bodies demonstration - Darrel Cheu	WALC 3121
12:00 pm – 1:00 pm	Lunch Break	
1:00 pm – 2:20 pm	Gamma attenuation lab - All student helpers	BHEE B073
2:30 pm – 4:00 pm	Half-life determination from sub-critical pile samples - All student helpers	BHEE B073

8:30 pm – 10:30 pm      Movie Night – "NUCLEAR NOW" an Oliver Stone Film      WALC 1055

**Wednesday, June 21, 2023**

9:00 am – 9:40 am      Fission, fusion, nuclear terminology, and simplified reactor physics lecture - Andres Gomez      WALC 3121

9:50 am – 10:30 am      Power production, spent nuclear fuel and other uses of nuclear lecture - Andres Gomez      WALC 3121

10:30 am – 12:00 pm      Thermal Hydraulics Research Facility tour - Dr. Kim      WALC 3121

12:00 pm – 1:00 pm      Lunch Break

1:00 pm – 2:20 pm      Subcritical multiplication lab - All student helpers      BHEE B073

2:30 pm – 4:00 pm      Subcritical pile flux profile lab - All student helpers      BHEE B073

4:00 pm – 4:15 pm      Load vans to cookout

4:15 pm – 6:30 pm      Cookout at Happy Hollow Park      Happy Hollow Park

**Thursday, June 22, 2023**

9:00 am – 9:50 am      Power production continued, SMR's and advanced reactors, nuclear fuel cycle - Alex Baker      WALC 3121

10:00 am – 10:50 am      Additional uses of nuclear, PUR-1, ALARA refresher and HPGe and Maestro software basics lecture - William Richards      WALC 3121

11:00 am – 12:00 pm      Faculty research presentation - Dr. Garner      WALC 3121

12:00 pm – 1:00 pm      Lunch Break

1:00 pm – 3:00 pm      Unknown sample irradiation in PUR-1 lab/Tours - All student helpers      BHEE B073

3:00 pm – 4:00 pm      COE presentation, concluding remarks, townhall setting - Everyone      BHEE 170

**Friday, June 23, 2023**

8:00 am - 8:30 am      Load Buses - Everyone

8:30 am -10:30 am (EST)      Travel to Clinton Nuclear Power Plant

9:30 am – 2:00 pm (CST)      Tour of Clinton Nuclear Power Plant

3:00 pm – 5:00 pm (EST)      Travel back to Purdue and drop off at dorms