**Physics 305 Experimental Modern Physics**

**Lab Schedule: Fall 2020 Hybrid Version**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Week | **Group 1A**  **(MT)**  **Room 108** | **Group 2A**  **(MT)**  **Room 109** | **Group 3A**  **(MT)**  **Room 110** | **Group 4A**  **(MT) Room 111** | **Group 1B**  **(WR)**  **Room 108** | **Group 2B**  **(WR)**  **Room 109** | **Group 3B**  **(WR)**  **Room 110** | **Group 4B**  **(WR)**  **Room 111** |
| Week 0 Aug. 31 | **LabVIEW Tutorial / Tutorial on Experiment Control and Data Acquisition using the LabJack Interface** | | | | | | | |
| Week 1  Sept. 7 | **Experiment Control Using Laboratory Instrumentation with LabVIEW (Remotely)** | | | | | | | |
| Week 2  Sept. 14 | **Millikan Oil Drop (Remotely)** | | | | | | | |
| Week 3  Sept. 21 | **Frank Hertz (Remotely)** | | | | | | | |
| Week 4  Sept. 28 | **Interferometer (Part 1)** | | | | | | | |
| Week 5  Oct. 5 | **Interferometer (Part 2)** | | | | | | | |
| Week 6  Oct. 12 | **Nuclear Elec.** | **Nuclear Elec.** | **Lock-In Amp.** | **Lock-In Amp.** | **Nuclear Elec.** | **Nuclear Elec.** | **Lock-In Amp.** | **Lock-In Amp.** |
| Week 7  Oct. 19 | **Fall Break – No Lab for Section 1** | | | | **Compton**  **Sc.** | **Na 22** | **Mie Sc.** | **Mie Sc.** |
| Week 8  Oct. 26 | **Compton**  **Sc.** | **Na 22** | **Mie Sc.** | **Mie Sc.** | **Compton**  **Sc.** | **Na 22** | **Mie Sc.** | **Mie Sc.** |
| Week 9  Nov. 2 | **Compton**  **Sc.** | **Na 22** | **Mie Sc.** | **Mie Sc.** | **Lock-In Amp.** | **Lock-In Amp.** | **Nuclear Elec.** | **Nuclear Elec.** |
| Week 10  Nov. 9 | **Lock-In Amp.** | **Lock-In Amp.** | **Nuclear Elec.** | **Nuclear Elec.** | **Mie Sc.** | **Mie Sc.** | **Compton**  **Sc.** | **Na-22** |
| Week 11  Nov. 16 | **Mie Sc.** | **Mie Sc.** | **Compton**  **Sc.** | **Na-22** | **Mie Sc.** | **Mie Sc.** | **Compton**  **Sc.** | **Na-22** |
| Week 12  Nov. 23 | **Mie Sc.** | **Mie Sc.** | **Compton**  **Sc.** | **Na-22** | **Thanksgiving Break – No Lab for Section 2** | | | |
| Week 13  Nov. 30 | ***No Lab – Presentations*** | | | | | | | |
| Week 14  Dec. 7 | ***No Lab – Finish Assignments*** | | | | | | | |

**\*\*\* Room numbers are as noted in column heading unless stated differently in each lab assignment. Nuclear experiments are always conducted in rooms 108 and 109 (Compton in 108 and Na 22 in 109) with other labs in rooms 110, 111, or 112.**

Due Dates (where specific dates are given they are subject to change):

1. The lab notebooks for ALL ONE WEEK labs are due the following week at the beginning of your first lab period.
2. The lab notebooks for ALL TWO WEEK labs are due the week following the second week of lab for that experiment. In other words, the week after the two week lab has been completed. It is also due, at the beginning of your first lab period.
3. The first writing assignment (first draft of first scientific letter) is due at 11:30 a.m. on Tuesday, October 13th, 2020. Topic: Fundamental Charge on Electron (Millikan).
4. The second writing assignment (final draft of first scientific letter) is due on Thursday, October 22nd, 2020 at 11:30 a.m.
5. The third writing assignment (second scientific letter) is due on Tuesday, November 17th, 2020 at 11:30 a.m. Topic: Quantization of Atomic Energy Levels (Franck-Hertz).
6. The fourth writing assignment (third scientific letter) is due on Tuesday, December 8th, 2020 at noon. Topic: Index of Refraction of Air (Interferometer).