Advanced Physics Lab Contact & Schedule University of Toronto Winter 2021

**Before completing this form, see** [**www.physics.utoronto.ca/apl**](https://www.physics.utoronto.ca/apl/)**.**

**After applying to enroll in the Advanced Physics Lab on ACORN, this form must be emailed to the Lab Coordinator, David Bailey <****dbailey@physics.utoronto.ca****>, for approval.**

***Contact***

**Student Name:**

**Name (e.g. first) for Quercus experiment list:**

**Student Number: Course you are registered in:**

**Official UofT Email: @mail.utoronto.ca**

**Alternate Contact (Optional)** e.g. gmail /phone**:**

***Schedule***

**Please put tick-marks (✓) in the cells to indicate the times you would be happy to attend the lab** (including the normal Tuesday and Friday morning times), **Xs (🗶) to show the times when you cannot attend the lab, and question marks (?) to indicate times you could attend but would less happy to do so**. Be sure to indicate all currently known regular conflicts, even those outside the regular lab periods.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Mon | Tue | Wed | Thu | Fri |
| 9 – 10 |  |  |  |  |  |
| 10 – 11 |  |  |  |  |  |
| 11 – 12 |  |  |  |  |  |
| 12 – 13 |  |  |  |  |  |
| 13 – 14 |  |  |  |  |  |
| 14 – 15 |  |  |  |  |  |
| 15 – 16 |  |  |  |  |  |

**Do you plan to graduate in June 2021: YES/NO.**

**Please indicate here any other information** you think we should know, comments, or special requests.:

***Instructor Use Only*
 (Please leave blank, it will be used by us to record your grades)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Experiment** | **Session** | **Finish Date** | **Mark** | **Signature** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Formal |  |  |  |  |
| Oral Exam |  |  |  |  |

Advanced Physics Lab Experiment Preferences University of Toronto Winter 2021

**After applying to enroll in the Advanced Physics Lab on ACORN, this form must be emailed to the Lab Coordinator, David Bailey <****dbailey@physics.utoronto.ca****>, for approval.** Changes may be possible later, depending on experiment availability.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **List of experiments available:**

|  |  |  |
| --- | --- | --- |
| **Code** | **Prof** | **Experiment Name** |
| AFM  | JW | [Atomic Force Microscope](https://www.physics.utoronto.ca/~phy326/afm) (under development) |
| BRI  | KW | [Brillouin scattering](https://www.physics.utoronto.ca/~phy326/bri)  |
| C3D  | KW | [Conductivity in less than three dimensions](https://www.physics.utoronto.ca/~phy326/c3d)  |
| CC  | PS | [Cloud Chamber](https://www.physics.utoronto.ca/~phy326/cc)  |
| COMP  | RO | [Measurement of the Compton total cross section](https://www.physics.utoronto.ca/~phy326/comp)  |
| ESR  | KW | [Electron spin resonance](https://www.physics.utoronto.ca/~phy326/esr)  |
| FAR  | KW | [Faraday Waves](https://www.physics.utoronto.ca/~phy326/far)  |
| FE  | JW | [Ferroelectrics](https://www.physics.utoronto.ca/~phy326/fe) |
| FTS  | KW | [Fourier transform spectroscopy](https://www.physics.utoronto.ca/~phy326/fts)  |
| FVF  | PS | [Fractal Viscous Fingering](https://www.physics.utoronto.ca/~phy326/fvf)  |
| GAUS  | AV | [Gaussian Beams](https://www.physics.utoronto.ca/~phy326/gaus) |
| GE  | RO | [Gamma ray spectroscopy with a germanium detector](https://www.physics.utoronto.ca/~phy326/ge)  |
| GRAN  | KW | [Granular Patterns](https://www.physics.utoronto.ca/~phy326/gran) |
| HALL  | JW | [Semiconductor resistance, band gap, and Hall effect](https://www.physics.utoronto.ca/~phy326/hall)  |
| HENE  | AV | [The helium-neon laser](https://www.physics.utoronto.ca/~phy326/hene) |
| HEP  | PS | [High energy physics](https://www.physics.utoronto.ca/~phy326/hep)  |
| HTCM | JW | [High temperature superconductors (Make)](https://www.physics.utoronto.ca/~phy326/htc) |
| KNOT  | KW | [Knots and topological transformations in vibrating chains](https://www.physics.utoronto.ca/~phy326/knot)  |
| LAUE  | RO | [Laue back reflection of X-Rays](https://www.physics.utoronto.ca/~phy326/laue)  |
| LENS  | RO | [Lenses](https://www.physics.utoronto.ca/~phy326/lens)  |
| LPP  | PS | [Linear Pulse Propagation and Dispersion](https://www.physics.utoronto.ca/~phy326/lpp)  |
| MOS  | PS | [Mossbauer effect](https://www.physics.utoronto.ca/~phy326/mos)  |
| MUON  | RO | [Muon lifetime](https://www.physics.utoronto.ca/~phy326/muon)  |
| NEEL  | PS | [Phase change in chromium at the Neel temperature](https://www.physics.utoronto.ca/~phy326/neel)  |
| NMR  | KW | [Nuclear magnetic resonance](https://www.physics.utoronto.ca/~phy326/nmr)  |
| OPT  | AV | [Optical Tweezers](https://www.physics.utoronto.ca/~phy326/opt)  |
| PXR  | RO | [Powder method of X-ray analysis](https://www.physics.utoronto.ca/~phy326/pxr)  |
| QIE | AV | [Quantum Interference and Entanglement](https://www.physics.utoronto.ca/~phy326/qie)  |
| RAM | KW | [Raman Effect](https://www.physics.utoronto.ca/apl/ram/) (under development) |
| RB  | AV | [Optical pumping of rubidium](https://www.physics.utoronto.ca/~phy326/rb)  |
| SOL  | PS | [Solitons](https://www.physics.utoronto.ca/~phy326/sol)  |
| SONO  | PS | [Sonoluminescence](https://www.physics.utoronto.ca/~phy326/sono)  |
| SQM  | RO | [SQUID magnetometer](https://www.physics.utoronto.ca/~phy326/sqm)  |
| STM | JW | [Scanning Tunnelling Microscope](https://www.physics.utoronto.ca/apl/stm/)  (under development) |
| XRF  | PS | [X-ray fluorescence](https://www.physics.utoronto.ca/~phy326/xrf)  |
| SPEC  | DB | [Special Projects](https://www.physics.utoronto.ca/~phy326/spec)  |

Notes:  During the semester* The supervising professor for an experiment may change.
* New experiments may be added or deleted.
 | Professors are:  DB = [David Bailey](https://www.physics.utoronto.ca/~dbailey) RO = [Robert Orr](https://hep.physics.utoronto.ca/~orr/) PS = [Pierre Savard](https://savard.physics.utoronto.ca/) AV = [Amar Vutha](https://www.physics.utoronto.ca/~vutha/) JW = [John Wei](https://www.physics.utoronto.ca/~wei/) KW = [Kaley Walker](https://www.physics.utoronto.ca/members/walker-kaley/)**List in order of preference** at least 25 of the experiments you would like to do. If you are taking this course for the first time, your rankings should include experiments for each professor. List the codes only and list your most preferred experiments first:1)   2)   3)   4)    5)   6)   7)   8)   9)   10)   11)   12)   13)   14)   15)   16)  17)   18)   19)   20)  21)   22)   23)   24)   25)   26)   27)   28)  29)   30)   31)   32)  Students in PHY 327 and 424 should keep in mind that they must do experiments with 3 different professors, so be sure to list a mix of experiments. |