

Risk Assessment Form

Title of Risk Assessment Face2Face Teaching – Physics undergraduate teaching lab during COVID19 pandemic

Date of assessment 18 September 2020

Department Physics

Date review due Week 2, Term 1

Description of Task/Process This covers the safe management of teaching activities in the undergraduate laboratories in the department of Physics during the COVID19 pandemic

Assessment carried out by Susan Burrows

Additional information

Demonstrator is defined as the person who is providing face to face teaching. At this time, teaching will be to a smaller group of students as per the overarching 'blueprint' risk assessment for teaching activities (O1 RA Teaching Activities v1.3).

Academic Lab Lead is defined as those who have responsibility for the teaching laboratory. They must discuss this risk assessment in advance of the start of term with those who are involved in the teaching of that programme and refer also to the overarching 'blueprint' risk assessment for teaching activities (O1 RA Teaching Activities v1.3) which has other relevant information for staff.

Attendees are defined as anyone attending the space including those who may attend intermittently, such as IT, cleaners.

All Teaching Lab spaces will be assigned in advance. These spaces are likely to have relatively fixed layouts due to the equipment involved and will vary in size and shape but will generally fall within the scope of this risk assessment.

The hazard for all activities is transmission of the COVID19 virus. This is known to occur via droplets (A), aerosols (B) and contact with contaminated surfaces (C). These have been referenced in relation to the activities identified in the risk assessment. Where other activities are identified as a risk, consideration must be given to these means of transmission.

The following general principles of control apply to all parts of working and learning in the teaching laboratories. These control measures eliminate one or more of the methods of virus transmission

- (Eliminate) Anyone feeling unwell will not to come into the University
- (Control) Attendees will wear face coverings (unless they carry an exemption)
- (Control) Academic Lab Lead, demonstrators and technical staff may wear a face shield or face mask if there are communications issues, but should wear a face covering at other times.
- 2 m distancing must be observed as far as possible by all within the laboratory. Situations where this is not possible are identified later in the risk assessment with suitable controls
- Before touching any shared equipment, all persons must sanitise or wash their hands thoroughly

University of Warwick Risk Assessment Form

<u>Hazards and how they may cause harm</u>	<u>Who may be at Risk?</u>	Existing <u>Control Measures</u> (delete or add to as appropriate)	<u>Current Risk Level</u> (VL,L,M,H,VH)	Where current risk is M, H or VH, what additional <u>Control Measures</u> are required?	Action required by whom & by when?	<u>Final Risk Level</u>
<p>Transmission of Covid-19.</p> <p>An infected person could be present in the queue outside the laboratory who could transmit the virus to others</p> <p>(A, B)</p>	Attendees	<ul style="list-style-type: none"> (Control) Attendees will gather on the science concourse with markings; and signage to inform on need for 2m social distancing. A flexible entry time of 15 minutes will help control numbers. Academic Lab Leads/Demonstrators are responsible for maintaining the above. (Control) A time gap of one hour is set between back to back sessions (Control) Hand sanitiser station is in place on entry to the teaching space (Control) Non-contact facial temperature will be taken. If the temperature is 37.8C or higher then access will be denied and person referred to the Stay Safe at Warwick webpages 	L	Demonstrators on the ground to assist with moving the attendees promptly away where there are known pinch-points.		
<p>Transmission of Covid-19.</p> <p>An infected person could be present in the teaching laboratory who could transmit the virus to others</p> <p>(A, B, C)</p>	Attendees, Demonstrators, Academic Lab Lead Cleaning staff IT staff	<ul style="list-style-type: none"> (Reduce) The Programme Leads have reduced face-to-face teaching practical sessions where possible, by introducing some online teaching sessions, and pre-preparing video demonstrations, within the overall teaching programme (Reduce) Class sizes have been reduced; in these cases, Academic Lab Leads have provided additional on-line teaching resources such as 	L	Academic Lab Leads to ensure that there is an adequate supply of disinfectant wipes/spray bottle for each space. Suitable waste receptacles to be available, which are emptied regularly. These may need to be added to		

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		<p>webcams to enable students to participate remotely</p> <ul style="list-style-type: none"> • (Reduce) A one-way system is in place into/out of the space to avoid contact with other students at start and finish times (see appendices). • (Reduce) Equipment stations are laid out to separate everyone by 2m • (Reduce) Ventilation will be via forced ventilation, where Estates have confirmed that the systems should not transmit the virus, otherwise the systems will be switched off • (Isolate) Teaching laboratories that are not in use are secured so that persons cannot use them unauthorised • (Isolate) The use of Perspex screens (or other suitable physical barrier) between attendees has been considered if there is a business-critical need to introduce more people to the space • (Control) Layout drawings or use of floor markings or zones should be present in the room showing where attendees may work/travel 		<p>the Estates Cleaning regime.</p> <p>Teaching Programme Leads to consider the impact of the Academic Lab Lead conducting numerous teaching sessions and Academic Lab Lead wellbeing and work-life balance. This should be picked up under separate departmental arrangements and workload modelling. Academic Lab Leads should raise any issues with their line manager in the first instance or should speak to their HR Business Partner.</p> <p>Where Perspex screens or other suitable barrier is</p>		

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		<ul style="list-style-type: none"> • (Control) The Academic Lab Lead will manage entry and egress from the space advising students to fill the room in a way that avoids or limits crossing paths and in a way that maintains distancing. Students will fill each space from the back to the front, guided by demonstrators • (Control) Doors and windows to be kept open where possible • (Control) The Academic Lab Lead must explain to students, at the start of the session the procedures for engaging with others and for leaving the room at the end • (Control) Academic Lab Lead and demonstrators to be mindful to maintain a 2 m distance from others, where possible, when moving around the space. • (Control) Demonstrators are assigned to a small group of attendees per practical session to answer their queries • (Control) Where possible, for second year labs, demonstrators will remain in a side room; If a student requires assistance or needs to leave their work space they should contact the 		<p>being considered, the business-critical need will require endorsing by the Head of Department.</p> <p>Timetable and one-way system shared with service owner for infrastructure to reduce space sharing between students and IT staff needing comms room access</p>		

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		<p>demonstrator via Teams in the first instance</p> <ul style="list-style-type: none"> • (Control) Where it is necessary for the Academic Lab Lead/demonstrator to speak independently to a student, a distance of at least 1m should be maintained. The time visiting individual students should be limited to as short a duration as possible (< 5 minutes) • (Control) Technical Support Team will wipe down any hard surfaces with a validated disinfectant (spray/wipe) before and after each practical session • (Control) Touchpoints regularly cleaned by Estates Cleaning team • (Control) Academic Lab Lead to follow the guidance on the Stay Safe at Warwick webpages if anyone reports they or members of their household have Covid-19 symptoms • (Control) Information on how to reduce transmission of the virus provided to staff and students, with reminder signage and information being on display around the University 				

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<p>Inadequate Distancing / Uncontrolled contact</p> <p>Attendees unable or not following the 2m distance separation (A, B, C)</p>	Attendees, Demonstrators, Academic Lab Lead	<ul style="list-style-type: none"> • (Eliminate) Attendance to be kept to as minimum a number as possible. For year 1, maximum 60 attendees, across eight interconnected lab spaces. For year 2, maximum 60 attendees across eight lab spaces. For year 3, maximum 20 attendees in two lab spaces. • (Reduce) A one hour gap between each class allows students to leave and move between classes without encountering the next group of students • (Isolate) Physical barriers such as the use of Perspex screens will assist the separation of attendees where students may lean over a bench and become within 2m of another student (providing the screens are higher than a person’s nose and mouth and the business-critical need has been agreed) • (Control) Where furniture cannot be removed, attendees should be asked to sit at marked workspaces. Attendees should not be positioned face to face unless they can maintain 2m. Less than 2 m distancing is only permitted where attendees will be 	L			

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		back to back or where physical barriers/screens are put into place <ul style="list-style-type: none"> • (Control) Academic Lab Lead to assist the movement in/out of the space (where required) and to request that attendees sit only at the experimental stations • (Control) Academic Lab Lead to manage the class so attendees finish on time (to avoid, where possible, the mix of students with the next class) 				
Inadequate Ventilation , space too hot, too cold, or able to assist the transmission of Covid-19 if present. (A, B)	All users of the space	<ul style="list-style-type: none"> • (Reduce) Where possible, windows will be opened to provide natural ventilation • (Reduce) Estates have increased airflow of all forced ventilation to maximise the level of incoming fresh air. 	L			
Transmission of Covid-19 via collecting disposable PPE e.g. gloves An infected person could be present in the teaching	Attendees, Demonstrators, Academic Lab Lead	<ul style="list-style-type: none"> • (Reduce) One-way systems for collection and disposal of disposable PPE • (Reduce) All sizes available and easily identifiable • (Control) PPE to be disposed of in general waste bins by the wearer 	VL	Distribution of gloves in MPhys lab for STM to be done by demonstrator only		

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laboratory who could transmit the virus to others via droplet contamination (A, C)						
Transmission of Covid-19 via collecting non-disposable PPE e.g. lab coats, Safety eyewear An infected person could be present in the teaching laboratory who could transmit the virus to others via droplet contamination (A, C)	Attendees, Demonstrators, Academic Lab Lead	<ul style="list-style-type: none"> • (Control) Non-disposable PPE to be assigned to each person • (Control) Attendees should wipe down any non-disposable PPE (e.g. safety eyewear) with a validated disinfectant (spray/wipe) before and after each practical session. • (Control) Academic Lead will provide guidance regarding storage and cleaning requirements of PPE • (Control) Academic Lab Lead will ensure all non-disposable PPE is cleaned at the end of each session • (Control) Department-owned PPE will be stored in a suitable container 	L	Departments to produce a cleaning and storage regime guidance document for non-disposable PPE		
Transmission of Covid-19 via Shared equipment An infected person could be present in	Attendees, Demonstrators, Academic Lab Lead	<ul style="list-style-type: none"> • (Reduce) Where possible, multiple versions of equipment are available • (Reduce) Minimise numbers of students working in groups • (Reduce) Consider layout of equipment before each session to 	L	Departments to introduce a cleaning and storage regime for equipment		

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the teaching laboratory who could transmit the virus to others via droplet contamination (A, C)		maintains 2m social distancing. Some equipment relocated to different lab areas to maintain 2m social distancing				
Transmission of Covid-19 at the end of a working session An infected person could be present in the teaching laboratory who could transmit the virus to others in the community (A, B, C)	Attendees, Demonstrators, Academic Lab Lead	<ul style="list-style-type: none"> • (Control) All users in the space must remove used PPE in the teaching laboratory in line with departmental guidance • (Control) All users must sanitize their hands before exiting the teaching space • (Control) Doors maintained open during leaving phase • (Control) Ordered leaving to minimise interactions • (Control) Academic Lab Lead/Demonstrators to ensure all attendees move away from the exit as soon as possible • (Control) Academic Lab Lead to ensure all touch points/bench spaces at end of session are disinfected 	L	Departments to introduce a cleaning between teaching sessions guidance document		
Poor behaviour Attendees members not abiding by rules	Attendees, Demonstrators	<ul style="list-style-type: none"> • (Control) Academic Lab Lead/Demonstrator to challenge poor behaviour of those attending 	VL	Consider disciplinary channels.		

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laid down by the University in relation to Covid-19 (A, B, C)		<p>the teaching practical session. Repeated poor behaviour to be reported to Line Manager/Personal Tutor/Academic Lab Lead</p> <ul style="list-style-type: none"> (Control) Departmental staff (line managers) to challenge poor behaviour of staff 				
Unable to support 'Test & Trace' Unknown attendees, incorrect class lists, lost paperwork could mean that the department is unable to provide the data to support Test & Trace. This could result in those using the space not being contacted if there was a confirmed case of Covid-19 and spaces having to be closed unnecessarily.	All users of the space and a University reputational risk	<ul style="list-style-type: none"> (Reduce) Timetables to be in place identifying designated attendees for each session (Control) Attendance sheets to be used by those running the session(s). Collecting attendance records will be the responsibility of the Academic Lab Lead (Control) Departments to monitor completion of records of attendance (Control) Relevant data on students held in SITS which can be made available for 'Test & Trace' purposes. Staff data is held in HR Success Factors 	L	Departments to support the 'Test and Trace' arrangements of the University, in development with Public Health officials.		

Work should not be carried out until the assessment is completed and all required control measures are in place.

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Overall Final Risk Rating (Highest level in final column above)	L
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Additional Comments from Risk Assessor (e.g. funding or practical implications)	<p>Resourcing implications may be as follows:</p> <p>Academic Lab Leads to be supplied with face shields to deliver against this risk assessment and a means to clean and store these when not in use. Sufficient stocks of hand sanitiser/soap for staff to use prior to running sessions within a Teaching Lab to be in place.</p> <p>Disinfectant wipes/approved disinfectant to be routinely ordered and plentiful stocks maintained. Resources will be required to replenish stocks.</p> <p>Additional cleaning by Estates Cleaning may be required in highly used spaces and to empty waste receptacles where disposable face coverings and wipes may be thrown away.</p>
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Approved By	David Leadley
Date	21/09/2020



Position	Head of Department (Physics)
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Please print a copy, sign it, share it with teaching staff and keep for your records.

	Severity				
Likelihood	Superficial	Minor	Serious	Major	Extreme
Unlikely	Very low	Very low	Low	Low	Moderate
Possible	Very low	Low	Low	Moderate	High
Likely	Low	Low	Moderate	High	Very high
Very likely	Low	Moderate	High	Very high	Very high
Extremely likely	Moderate	High	Very high	Very high	Very high

	Risk Level
Very low	Acceptable risk - no action required
Low	Tolerable risk - further control measures not required, but status must be monitored
Moderate	Further control measures required to reduce risk as far as is reasonably practical
High	Urgent action required to allow activity to continue
Very high	Risk intolerable - activity must cease until the risk has been reduced

See '[Matrix for risk evaluation](#)' for further guidance.

First Year Teaching Laboratory – ONE-WAY Systems



ES1, ES3, ES5



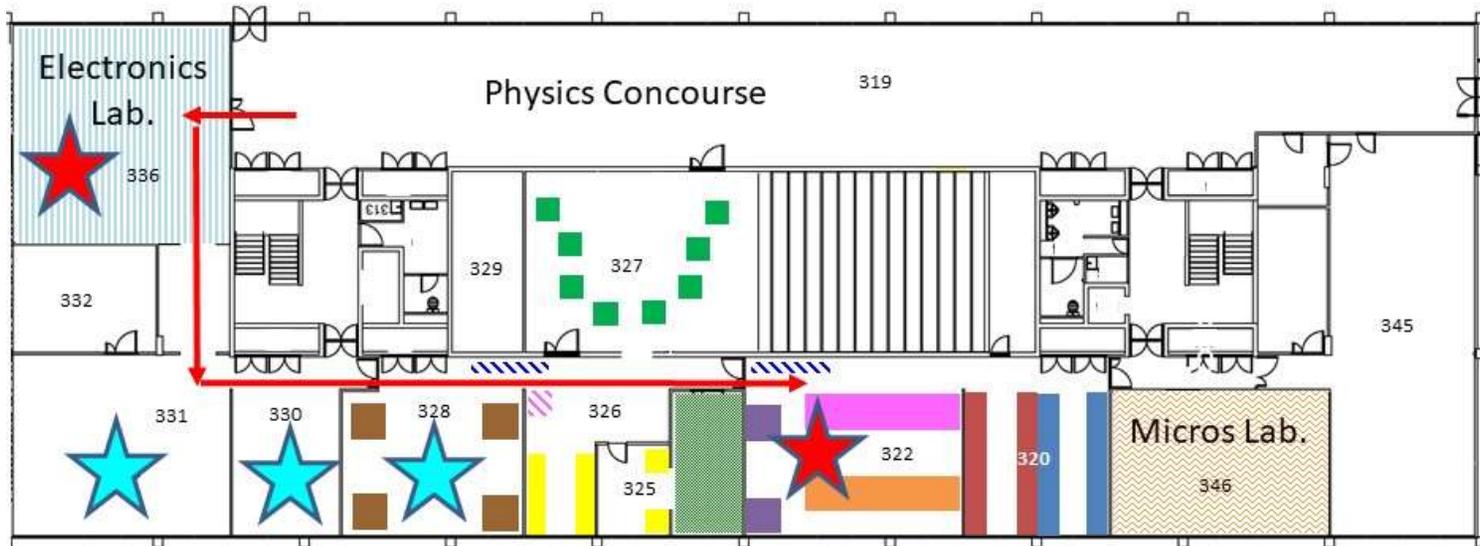
ES2, ES4, ES6



One-way system in place 10 - 10.15am, 1.30 – 1.45pm



Laboratory Office



First Year Teaching Laboratory – ONE-WAY Systems



ES1, ES3, ES5



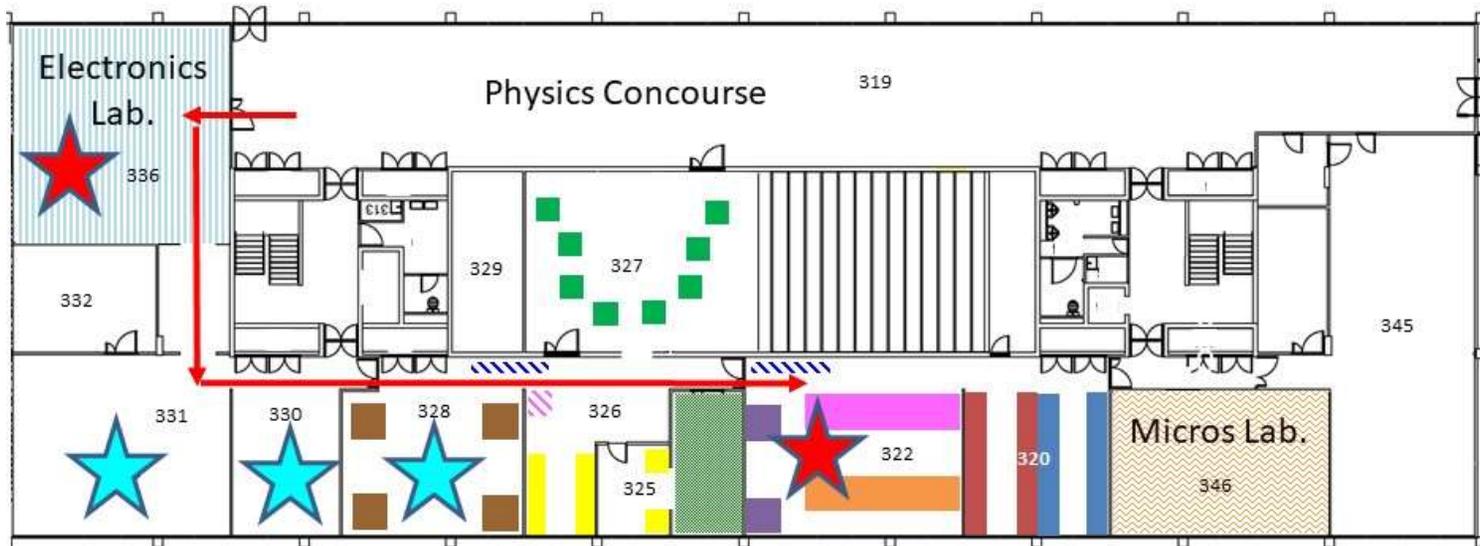
ES2, ES4, ES6



One-way system in place 10 - 10.15am, 1.30 – 1.45pm



Laboratory Office



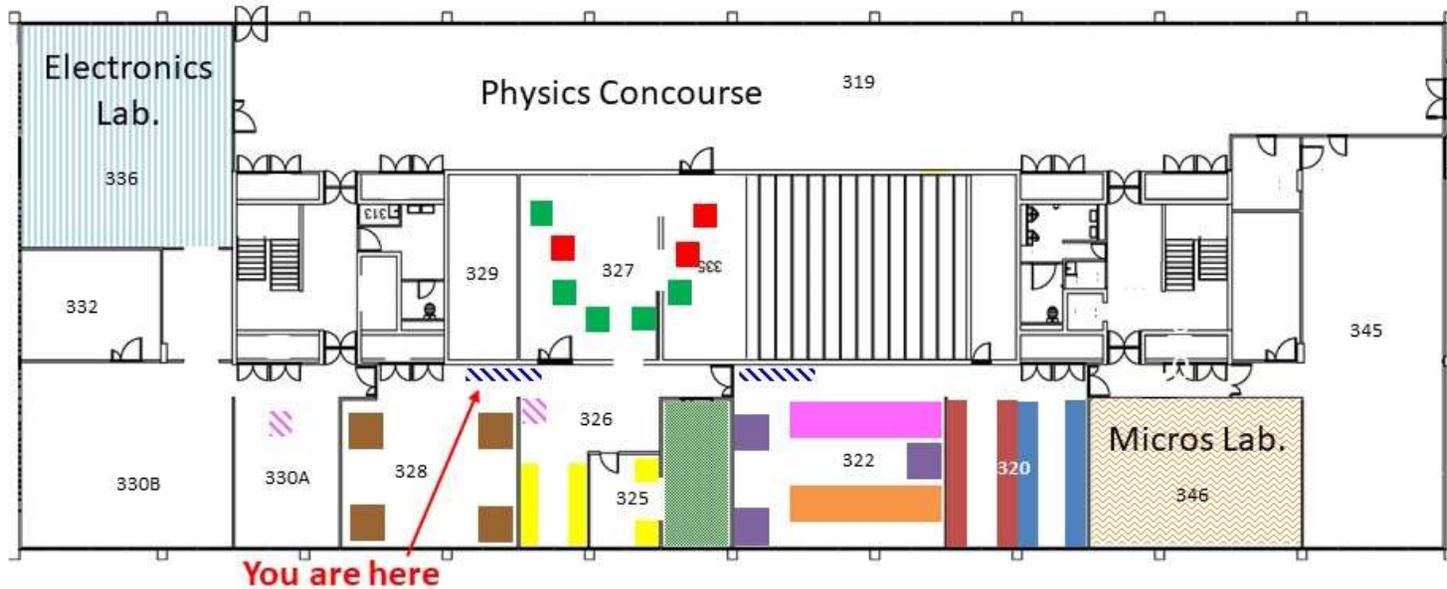
Second Year Teaching Laboratory – Floor Plan

Experimental Stations

- | | | |
|--|---|---|
| ■ A1 Astronomical Distances | ■ P1 Ultrasound | ■ S1 Gamma-ray Emission and Absorption Spectroscopy |
| ■ A2 Astronomical Instrumentation | ■ P3 NMR | ■ S2 Compton Scattering |
| ■ A3 Radio Astronomy | ■ P4 Powder X-ray Diffraction | ■ S3 Gamma-ray Spectroscopy |

Other Points of Interest

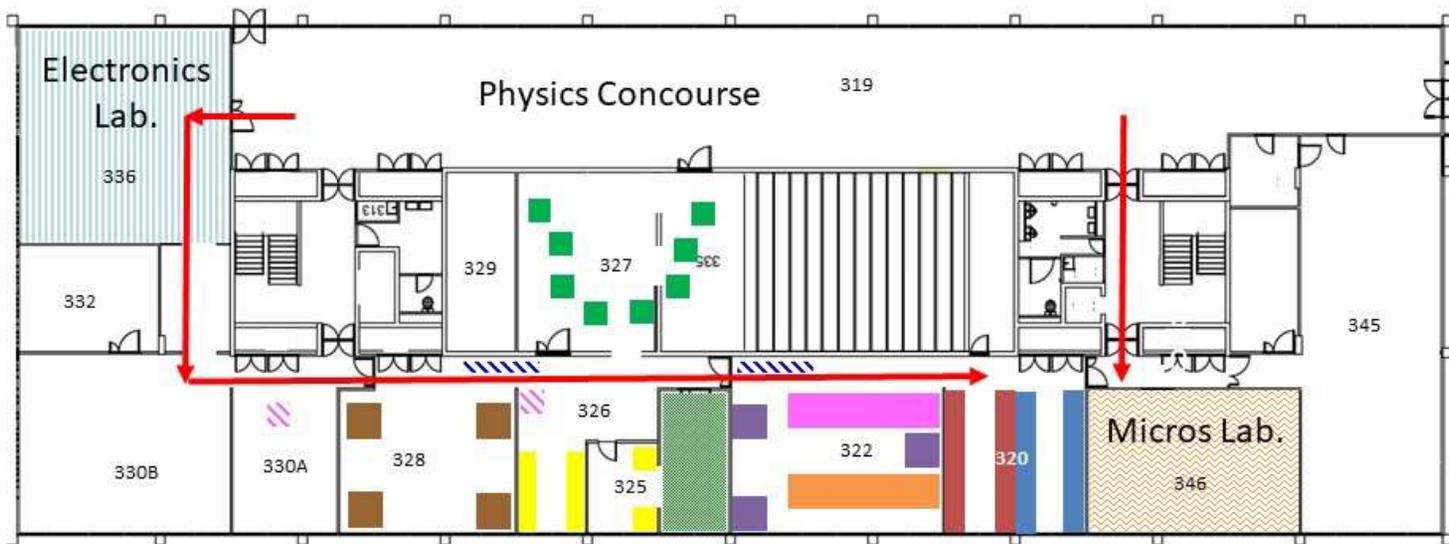
- | | | |
|--|--|--|
| ■ Laboratory Office | ▨ Hand in points | ▨ Laboratory Notice Boards |
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Second Year Teaching Laboratory – ONE-WAY Systems

→ One-way system in place 1.50pm – 2.15 pm

■ Laboratory Office ▨ Hand in points ▨ Laboratory Notice Boards



Second Year Teaching Laboratory – ONE-WAY Systems

→ One-way system in place 5.50pm – 6.15 pm

