

SET Lab Management Tool

USER MANUAL

Description:

This web-based application is created for the SET Lab management team to observe lab classes through different visualisations. Developed using the Python Dash framework and Plotly Express, it enables users to upload course information in either CSV or Excel formats. This user manual will show how to use and visualise all features of our Dash application.

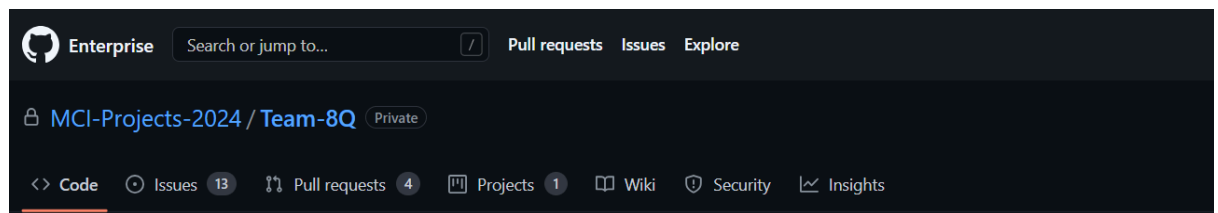
Steps:

Step 1: Access our Github link

<https://github.cs.adelaide.edu.au/MCI-Projects-2024/Team-8Q/projects/1>

Step 2: Access the link to go to our Dashboard

- Go to Code



- In the README.md, we have two options, users can:
 - + Run the application locally by following the steps shown in the README.md and click the link <http://127.0.0.1:8080/> in your web browser.
 - + Otherwise, users can run on the Cloud service through the link <https://mci-dash-app-iwjvfdhmq-km.a.run.app>

Step 3: Choosing 'Select by Course' or 'Select by Location'

Users can choose 'Select by Course' or 'Select by Location' by clicking 'Select by Course' or 'Select by Location' on the top right of the dashboard

If users would like to choose 'Select by Course' ⇒ Click 'Select by Course'

The screenshot shows the 'SET Lab Management Tool' interface. At the top right, the navigation links are 'SET', 'Select by Course' (which is highlighted in yellow), and 'Select by Location'. The main title 'SET Lab Management Tool' is centered in a dark blue header. Below the header, there are two buttons: 'Upload File' and 'Reset'. The 'Select Term:' dropdown menu is open, showing a list of terms. The 'Select Course:' dropdown menu is also open, showing a list of courses. The 'Select Date:' section has two input fields for 'Start Date' and 'End Date', with a right-pointing arrow between them. At the bottom, there are four buttons: 'Pie Chart', 'Table', 'Calendar', and 'Timeline'.

Otherwise, users can choose 'Select by Location' ⇒ Click 'Select by Location'

The screenshot shows the 'SET Lab Management Tool' interface with 'Select by Location' selected. The navigation links at the top right are 'SET', 'Select by Course', and 'Select by Location' (highlighted in yellow). The main title 'SET Lab Management Tool' is centered in a dark blue header. Below the header, there are two buttons: 'Upload File' and 'Reset'. The 'Select Term:' dropdown menu is open, showing a list of terms. The 'Select Technical Services Team:' dropdown menu is also open, showing a list of teams. The 'Select Building:' dropdown menu is open, showing a list of buildings. The 'Select Room:' dropdown menu is open, showing a list of rooms. The 'Select Date:' section has two input fields for 'Start Date' and 'End Date', with a right-pointing arrow between them. At the bottom, there are four buttons: 'Pie Chart', 'Table', 'Calendar', and 'Timeline'.

Step 4: Upload file

Go to Upload File ⇒ Go to the place that stores Excel spreadsheet file 'SET Prac classes 2014 living doc.xlsx'.

Then, it needs time to load.

When it is ready, it will show the information in each drop-down.

The screenshot shows the 'SET Lab Management Tool' interface with the 'Select Term:' dropdown menu open. The navigation links at the top right are 'SET', 'Select by Course' (highlighted in yellow), and 'Select by Location'. The main title 'SET Lab Management Tool' is centered in a dark blue header. Below the header, there are two buttons: 'Upload File' and 'Reset'. The 'Select Term:' dropdown menu is open, showing a list of terms: 'Semester 1', 'Semester 2', 'Winter School', 'Summer School', 'Term 4', and 'Trimester 1'. The 'Select Course:' dropdown menu is also open, showing a list of courses. The 'Select Date:' section has two input fields for 'Start Date' and 'End Date', with a right-pointing arrow between them. At the bottom, there are four buttons: 'Pie Chart', 'Table', 'Calendar', and 'Timeline'.

After choosing ‘Select by course’/ ‘Select by location’ and Upload file, users can follow either step 5 showing the next step when choosing ‘Select by course’ or step 6 showing the next step when choosing ‘Select by location’.

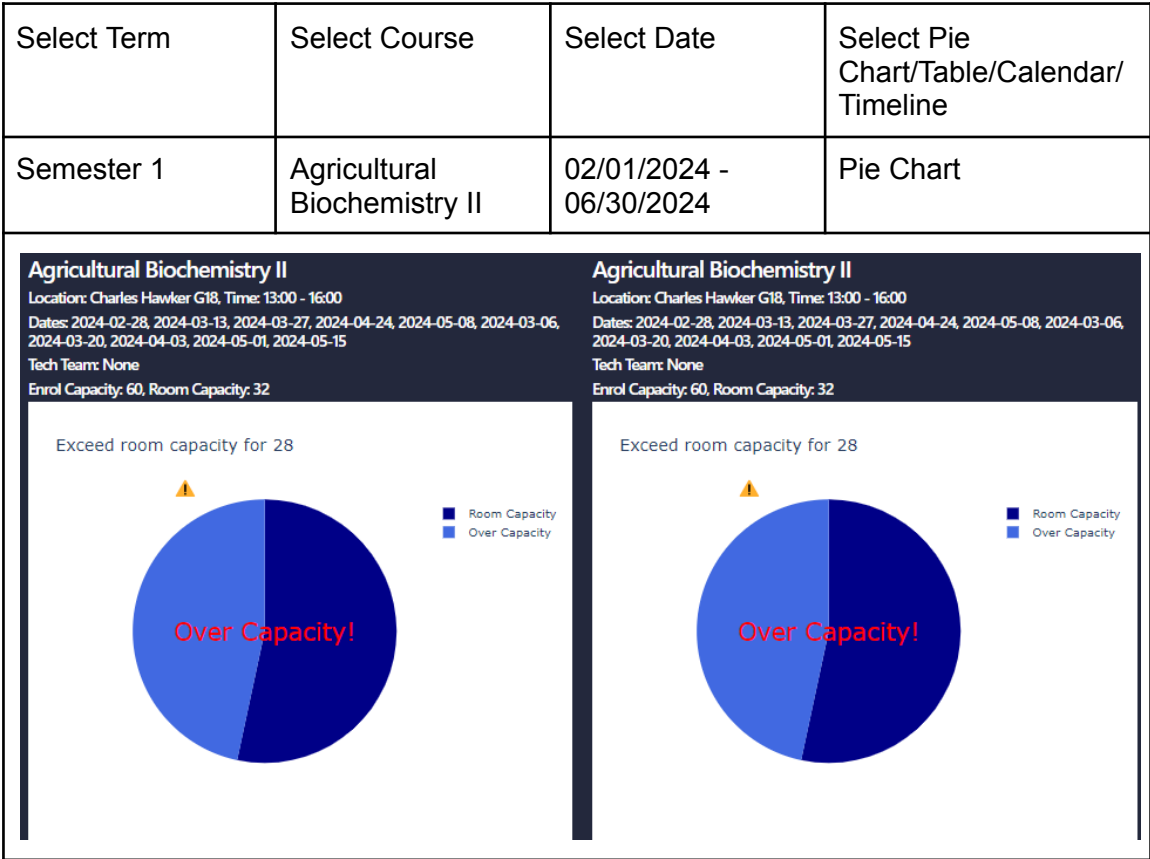
Step 5: Select options to visualise all features when choosing ‘Select by course’

Users can follow these steps to visualise all features

Select a single Term/multiple Terms ⇨ select single Course/multiple Courses ⇨ select Date ⇨ select Pie Chart/ Table/ Calendar/ Timeline

5.1 Selecting Pie Chart

When selecting Pie Chart, each pie chart will show information about each course, the location of that course, the date range and time that course will be taught, the room capacity, the enrolled capacity, and the tech team. If the enrolled capacities are over the room capacity, it will show that the number of enrolled capacities is over the room capacity. Otherwise, it will show the number of enrolled capacities and the remaining room capacity.



Select Term	Select Course	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1,	Animal Health II,	02/06/2024 -	Pie Chart

Agricultural Biochemistry II						
Subject / Catalogue	Location	Time	Enrol Capacity	Room Capacity	Tech Team	
AGRIC 2500WT	Charles Hawker G18	2024-02-28 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-13 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-27 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-04-24 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-05-08 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-06 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-20 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-04-03 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-05-01 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-05-15 13:00-16:00	60	32		

Select Term	Select Course	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1, Semester 2, Trimester 1	Animal Health II, Agricultural Biochemistry II, Agricultural Systems I, Animal Breed & Genetics III, Innovation in Agronomy III	02/06/2024 - 11/17/2024	Table

Agricultural Biochemistry II						
Subject / Catalogue	Location	Time	Enrol Capacity	Room Capacity	Tech Team	
AGRIC 2500WT	Charles Hawker G18	2024-02-28 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-13 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-27 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-04-24 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-05-08 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-06 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-03-20 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-04-03 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-05-01 13:00-16:00	60	32		
AGRIC 2500WT	Charles Hawker G18	2024-05-15 13:00-16:00	60	32		

Animal Health II						
Subject / Catalogue	Location	Time	Enrol Capacity	Room Capacity	Tech Team	
ANIML SC 2545RW	Poultry Section External	2024-05-30 13:00-16:00	35	70		
ANIML SC 2545RW	Callaghan G32	2024-03-21 13:00-16:00	35	48		
ANIML SC 2545RW	Callaghan G32	2024-03-28 13:00-16:00	35	48		
ANIML SC 2545RW	Callaghan G32	2024-04-04 13:00-16:00	35	48		

5.3 Selecting Calendar

When selecting Calendar, the calendar will show information about the course each month. On the day that the course will be held, the calendar will show information about that course, such as location (building and room), length of time that course will be taught, name of class, and the tech team.

Select Term	Select Course	Select Date	Select Pie Chart/Table/Calendar/Timeline
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Semester 1	Agricultural Biochemistry II	02/01/2024 - 06/30/2024	Calendar
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March 2024						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
				1	2	3
4	5	6 Agricultural Biochemistry II ● PR02, 11562_1 Charles Hawker G18 13:00 - 16:00 Tech Team: None	7	8	9	10
11	12	13 Agricultural Biochemistry II ● PR01, 10826_2 Charles Hawker G18 13:00 - 16:00 Tech Team: None	14	15	16	17
18	19	20 Agricultural Biochemistry II ● PR02, 11562_2 Charles Hawker G18 13:00 - 16:00 Tech Team: None	21	22	23	24
25	26	27 Agricultural Biochemistry II ● PR01, 10826_3 Charles Hawker G18 13:00 - 16:00 Tech Team: None	28	29	30	31

Select Term	Select Course	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1, Semester 2, Trimester 1	Animal Health II, Agricultural Biochemistry II, Agricultural Systems I, Animal Breed & Genetics III, Innovation in Agronomy III	02/06/2024 - 11/17/2024	Calendar

February 2024						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
			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			
		Agricultural Biochemistry II ● PR01, 10826_1 Charles Hawker G18 13:00 - 16:00 Tech Team: None	Agricultural Systems I ● PR01, 11582_4 Southern Barns Sensory G2 13:00 - 16:00 Tech Team: None			
			Agricultural Systems I ● PR01, 11528_4 Southern Barns Sensory G2 13:00 - 16:00 Tech Team: None			
			Animal Breed & Genetics III ● WR01, 19028_1 Sheep Section External 14:00 - 16:00 Tech Team: None			
			Agricultural Systems I ● PR01, 11582_3 Southern Barns Soils G2 13:00 - 16:00 Tech Team: None			
			Agricultural Systems I ● PR01, 11528_3 Southern Barns Soils G2 13:00 - 16:00 Tech Team: None			

5.4 Selecting Timeline View

When selecting Timeline, the timeline will show information about the course in a time range, such as location (building and room), date that the course will be taught, name of the class, and the tech team.

Select Term	Select Course	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1	Agricultural Biochemistry II	02/01/2024 - 06/30/2024	Timeline



Select Term	Select Course	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1, Semester 2, Trimester 1	Animal Health II, Agricultural Biochemistry II, Agricultural Systems I, Animal Breed & Genetics III, Innovation in Agronomy III	02/06/2024 - 11/17/2024	Timeline



Step 6: Select options to visualise all features when choosing ‘Select by location’

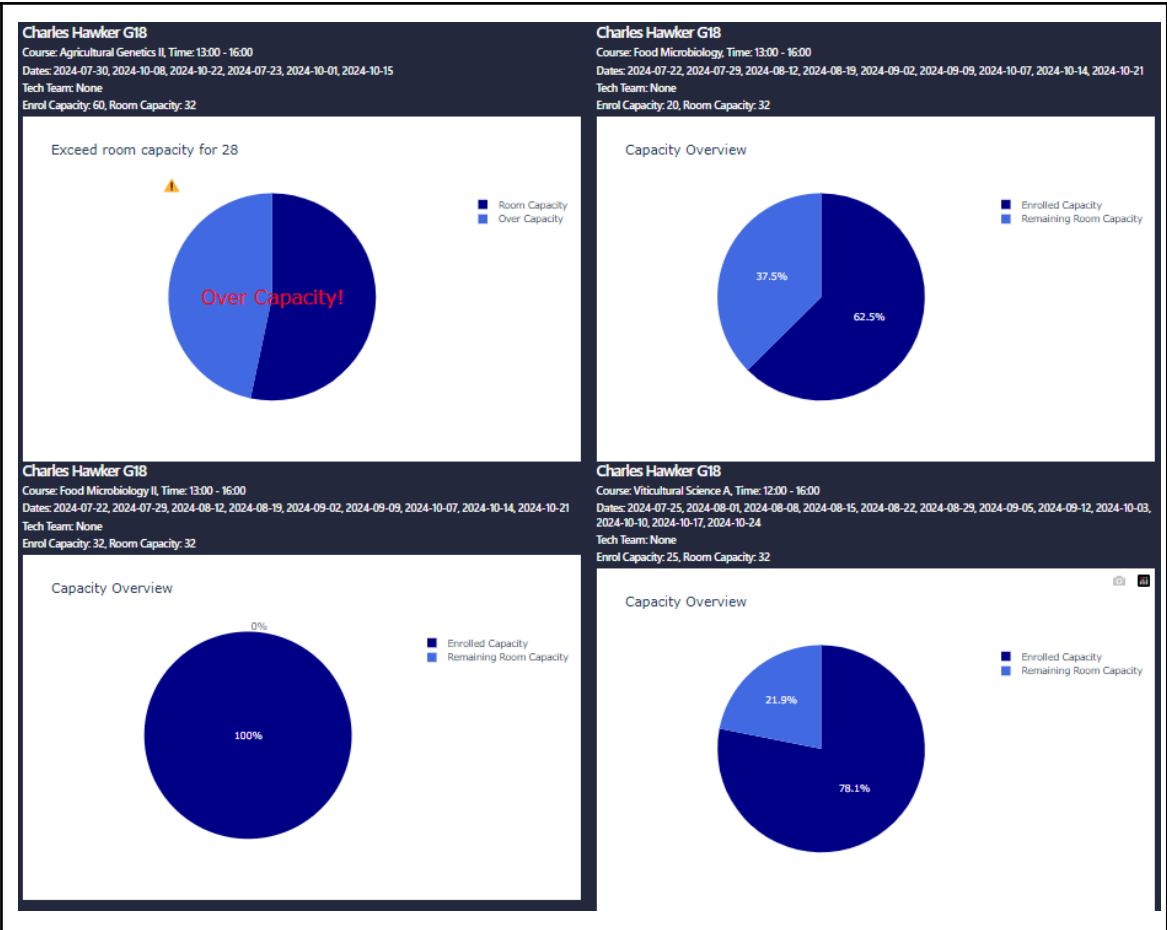
Users can follow these steps to visualise all features

Select single Term ⇨ select single Technical Services Team ⇨ select one Building ⇨ select one Room ⇨ select Date ⇨ select Pie Chart/Table/Calendar/Timeline

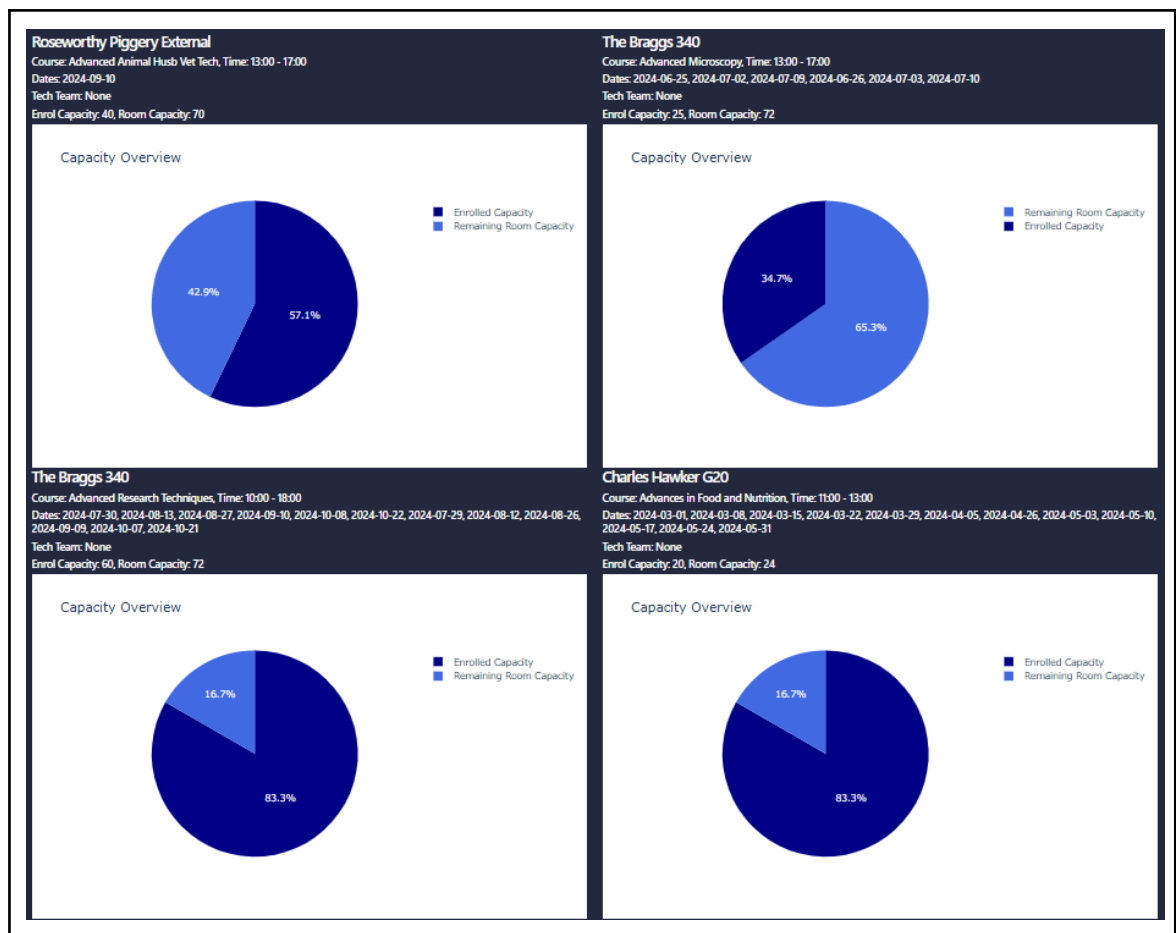
6.1 Selecting Pie Chart

When selecting Pie Chart, each pie chart will show information about how many courses will be held in the building, the date range and time that each course will be taught, the room capacity, the enrolled capacity, and the tech team. If the enrolled capacities are over the room capacity, it will show that the number of enrolled capacities is over the room capacity.

Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 2	None	Charles Hawker	G18	07/01/2024 - 11/17/2024	Pie Chart



Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1, Semester 2, Trimester 1, Winter School	None, Structures and Natural Resources, D&M and E&I, Design & Manufacturing	Charles Hawker, Mawson, Roseworthy Piggery, The Braggs, Williams	All	02/06/2024 - 11/17/2024	Pie chart



6.2 Selecting Table

When selecting Table, each table will show information about all courses that will be held in the building, such as the name of the class, location, length of time that course will be taught, the room capacity, the enrolled capacity, and the tech team.

Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 2	None	Charles Hawker	G18	07/01/2024 - 11/17/2024	Table

Agricultural Genetics II						
Subject / Catalogue	Course Descr	Location	Time	Enrol Capacity	Room Capacity	Tech Team
AGRIC 2518WT	Agricultural Genetics II	Charles Hawker G18	2024-07-30 13:00-16:00	60	32	
AGRIC 2518WT	Agricultural Genetics II	Charles Hawker G18	2024-10-08 13:00-16:00	60	32	
AGRIC 2518WT	Agricultural Genetics II	Charles Hawker G18	2024-10-22 13:00-16:00	60	32	
AGRIC 2518WT	Agricultural Genetics II	Charles Hawker G18	2024-07-23 13:00-16:00	60	32	
AGRIC 2518WT	Agricultural Genetics II	Charles Hawker G18	2024-10-01 13:00-16:00	60	32	
AGRIC 2518WT	Agricultural Genetics II	Charles Hawker G18	2024-10-15 13:00-16:00	60	32	
Food Microbiology						
Subject / Catalogue	Course Descr	Location	Time	Enrol Capacity	Room Capacity	Tech Team
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-10-21 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-10-14 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-10-07 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-09-09 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-08-19 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-08-12 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-07-29 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-07-22 13:00-16:00	20	32	
FOOD SC 7502WT	Food Microbiology	Charles Hawker G18	2024-09-02 13:00-16:00	20	32	

Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1, Semester 2, Trimester 1, Winter School	None, Structures and Natural Resources, D&M and E&I, Design & Manufacturing	Charles Hawker, Mawson, Roseworthy Piggery, The Braggs, Williams	All	02/06/2024 - 11/17/2024	Table

Advanced Animal Husb Vet Tech						
Subject / Catalogue	Course Descr	Location	Time	Enrol Capacity	Room Capacity	Tech Team
VET TECH 2040RW	Advanced Animal Husb Vet Tech	Roseworthy Piggery External	2024-09-10 13:00-17:00	40	70	
Advanced Microscopy						
Subject / Catalogue	Course Descr	Location	Time	Enrol Capacity	Room Capacity	Tech Team
BIOTECH 7009	Advanced Microscopy	The Braggs 340	2024-06-25 13:00-17:00	25	72	
BIOTECH 7009	Advanced Microscopy	The Braggs 340	2024-07-02 13:00-17:00	25	72	
BIOTECH 7009	Advanced Microscopy	The Braggs 340	2024-07-09 13:00-17:00	25	72	
BIOTECH 7009	Advanced Microscopy	The Braggs 340	2024-06-26 13:00-17:00	25	72	
BIOTECH 7009	Advanced Microscopy	The Braggs 340	2024-07-03 13:00-17:00	25	72	
BIOTECH 7009	Advanced Microscopy	The Braggs 340	2024-07-10 13:00-17:00	25	72	
Advanced Research Techniques						
Subject / Catalogue	Course Descr	Location	Time	Enrol Capacity	Room Capacity	Tech Team
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-08-26 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-08-12 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-07-29 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-10-22 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-08-13 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-09-10 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-08-27 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-09-09 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-07-30 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-10-08 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-10-07 10:00-18:00	60	72	
BIOTECH 7003	Advanced Research Techniques	The Braggs 340	2024-10-21 10:00-18:00	60	72	

6.3 Selecting Calendar

When selecting Calendar, the calendar will show information about courses in each month. On the day that courses will be held, the calendar will show information about all of these courses, such as location (building and room), length of time that course will be taught, name of class, and the tech team.

Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 2	None	Charles Hawker	G18	07/01/2024 - 11/17/2024	Calendar

July 2024						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22 Food Microbiology II ● PR01, 22733_1 Charles Hawker G18 13:00 - 16:00 Tech Team: None	23 Agricultural Genetics II ● PR02, 20686_1 Charles Hawker G18 13:00 - 16:00 Tech Team: None	24	25 Viticultural Science A ● PR01, 24830_1 Charles Hawker G18 12:00 - 16:00 Tech Team: None	26	27	28
29 Food Microbiology ● PR01, 24012_1 Charles Hawker G18 13:00 - 16:00 Tech Team: None	30 Agricultural Genetics II ● PR01, 20687_1 Charles Hawker G18 13:00 - 16:00 Tech Team: None	31				

Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 1, Semester 2, Trimester 1, Winter School	None, Structures and Natural Resources, D&M and E&I, Design & Manufacturing	Charles Hawker, Mawson, Roseworthy Piggery, The Braggs, Williams	All	02/06/2024 - 11/17/2024	Calendar

February 2024						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
5	6 Viticultural Science B ● PR01, 11578_2 Charles Hawker G09 09:00 - 12:00 Tech Team: None Viticultural Science B ● PR01, 11578_4 Charles Hawker G09 13:00 - 17:00 Tech Team: None Viticultural Science III ● PR01, 11577_2 Charles Hawker G09 09:00 - 12:00 Tech Team: None Viticultural Science III ● PR01, 11577_4 Charles Hawker G09 13:00 - 17:00 Tech Team: None	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26 Foundations Food & Nutrition ● PR01, 11833_1 Charles Hawker 110 16:00 - 17:00 Tech Team: None Introduction to GeoEnergy ● PR01, 12857_1 Mawson 122 15:00 - 17:00 Tech Team: None Molecules, Genes & Cells ● PR07, 13144_1 The Braggs 440 14:00 - 15:00 Tech Team: None	27 Molecules, Genes & Cells ● PR01, 11429_1 The Braggs 440 10:00 - 11:00 Tech Team: None Molecules, Genes & Cells ● PR11, 11115_1 The Braggs 440 15:00 - 16:00 Tech Team: None Molec Genes Cells (Vet Bio) ● PR02, 11545_1 The Braggs 440 14:00 - 15:00 Tech Team: None	28 Food Quality and Regulation ● PR01, 12825_1 Charles Hawker 110 14:00 - 17:00 Tech Team: None Molec Genes Cells (Vet Bio) ● PR14, 11118_1 The Braggs 440 16:00 - 17:00 Tech Team: None Molec Genes Cells (Vet Bio) ● PR03, 13138_1 The Braggs 440 10:00 - 11:00 Tech Team: None	29 Vet Immunol and Infect Disease ● PR01, 13516_4 Williams G22 13:00 - 17:00 Tech Team: None Vet Immunol and Infect Disease ● PR02, 10758_3 Williams G04 13:00 - 17:00 Tech Team: None Geophysics II ● PR01, 14048_2 Mawson G12 13:00 - 17:00 Tech Team: None			

6.4 Selecting Timeline view

When selecting Timeline, each timeline will show information about all courses in a time range, such as location (building and room), date that course will be taught, name of the class, and the tech team.

Select Term	Select Technical Services Team	Select Building	Select Room	Select Date	Select Pie Chart/Table/Calendar/Timeline
Semester 2	None	Charles Hawker	G18	07/01/2024 - 11/17/2024	Timeline



Semester 1, Semester 2, Trimester 1, Winter School	None, Structures and Natural Resources, D&M and E&I, Design & Manufacturing	Charles Hawker, Mawson, Roseworthy Piggery, The Braggs, Williams	All	02/06/2024 - 11/17/2024	Timeline
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