

INTRODUCTION

The Challenges

Training is part and parcel of a career life in SingHealth. However, learners are faced with many challenges when it comes to attending and completing trainings conducted in classrooms, including:



Waiting for training to become available

Trainer and learners having to travel to venue

Class size is limited by seating capacity of venue

Late comers cause delay and will miss out on information

Overcoming Challenges & the Extra Miles

To overcome these challenges, SingHealth Office of Biosafety (OoB) embarked on the SingHealth e-learning platform in 2017 to host its training programmes. To further learning experience, OoB also harmonised its two safety trainings to the Workplace Safety & Health Council (WSHC) Higher Education and Research Sector (HERS) workgroup initiatives, so that learners completed harmonised trainings in other institutions of higher learning (IHL) do not need to repeat similar trainings in SingHealth and vice versa.

Our Aim

The aim is to evaluate how e-learning and harmonised courses have benefited both OoB and our learners.

OUR APPROACH

- A team consisting of the Assistant Director and Managers of SingHealth OoB worked closely with SingHealth Academy to acquire the competency and resources (hardware and software) to develop classroom training materials into e-learning programmes.
- Engage our training coordinators during the development phase to test and feedback on the e-learning materials.
- Develop workflow and tracking system to manage accounts and track the completion rate of our learners.
- Develop a structured training matrix for adoption by our stakeholders.
- The Assistant Director, OoB sits in the WSHC HERS workgroup to develop harmonised training materials and assessment contents with other local IHLs.
- Integrating evaluation into the training programmes for learners to provide feedbacks. The statistics are tracked as part of OoB Balanced Score Card KPI since 2019.
- Evaluate the time and resources saved, and how it has contributed to OoB's GO Green effort. This also supports the ISO 14001 effort subscribed by SingHealth HQ.



RESULTS

The transition to e-learning has been rewarding, and OoB recognises some of the benefits brought by e-learning:



Learners can attend trainings at their own time and pace

Training can occur anywhere with computer and network access

Any number of learners can be trained at any time

Assessment pools can be created to randomise assessment questions

Furthermore, harmonising two of our trainings with the other IHLs, a portion of our learners benefited from not having to repeat prerequisite safety courses and can focus on other trainings.

Training Matrix

The e-learning effort is complement by the training matrix developed to provide the framework for completion timeline and refresher requirements:

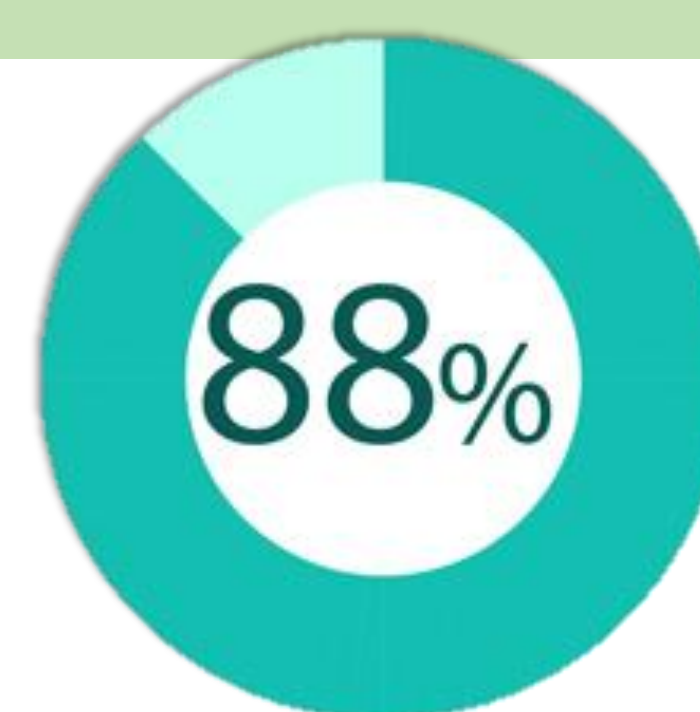
Training Course Title	Safety Orientation for Academia	WSH Risk Management	Biological Safety Awareness	Chemical Safety Awareness	Chemical and Biological Spill Drill	Responsible Care and Use of Laboratory Animals (RCULA)	Radiation safety training required by NEA
Training Provider	SingHealth OoB	SingHealth OoB	SingHealth OoB	SingHealth OoB	SingHealth OoB	SEMC	Unspecified
Time frame to complete (From start of employment)	Within 1 week	Within 1 month	Within 1 month	Within 1 month	Within 6 months	Before commencement of animal work	Before commencement of radiation work
Proof of completion	Certificate of completion	Certificate of completion	Certificate of completion	Certificate of completion	Attendance record	Certificate of completion	Certificate of completion
Refresher	Not required	3 years	3 years	3 years	Not required	Not required	Not required
Work activities*							
Strictly administrative only (Do not work in labs)		✓					
Working with any biological materials		✓	✓		✓		
Working with any chemicals (including nanomaterials)		✓		✓	✓		
Working with any laboratory animals		✓	✓			✓	
Working with radioactive substances or irradiator		✓					✓
Working with high powered laser (Class 3b or 4)		✓					✓

OoB Go-Green Effort

Since 2017, SingHealth OoB has trained more than 1500 learners using the e-learning platform. Consider the number of learners completing the training courses till 2018, and the number of pages needed to be printed (four slides per page, double sided), OoB would have to print a total of **52018** pieces of paper!

Consider each piece of printed paper cost S\$0.15, that is **S\$7802** saved!

	Safety Orientation	Biological Safety	Chemical Safety	WSH Risk Management
No. of learners	172	453	446	444
No. of pages	24	34	38	35
Total No.	4128	15402	16948	15540
	Total			52018



In our 2018 survey, **88%** of our learners find the e-learning courses interesting and engaging!

CONCLUSION

OoB is in its third year of embarking on e-learning and is doing well in satisfying learners' expectations. There are plans to roll out more safety courses in the future, and OoB will continue to excel in safety training capabilities.