



**OFFICE OF SAFETY, HEALTH AND
ENVIRONMENT
ANNUAL REPORT 2018**

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Our Vision

A safe and disaster-resilient university where safety, health, environmental protection and emergency preparedness are embraced as core values.

Our Mission

Saving lives, preventing injuries, ensuring business continuity by transforming mindsets and facilitating the development and implementation of best practices.

Our Values

Nurturing Potentials

All for One and One for All

Service Excellence

I Own All I Do

+ To Rise Above and Go Beyond our Normal Limits

DIRECTOR'S MESSAGE

Welcome to the 2018 Annual Safety & Health Report.

This report highlights the safety & health achievements of the National University of Singapore as well as some key programmes, activities and range of services provided by the Office of Safety, Health and Environment (OSHE).

In 2018, we continue to strengthen our safety & health management system by launching new standards, guidelines

and enhancing our IT platform, *EHS 360*, to enable us to better support new research focus areas and educational pedagogy, and to improve users' experience.

I would like to thank our partners within and outside of NUS for working closely with us to achieve synergies and to enhance safety and health management in NUS. I would also like to thank NUS Senior Management, the Deans and Directors for their unwavering support without which, we would not be able to attain the desired safety & health outcomes.

This report is by no means comprehensive. However, I hope it will give you a glimpse into the myriad of activities undertaken by OSHE to deliver our mission and to make NUS a safety and disaster-resilient university.

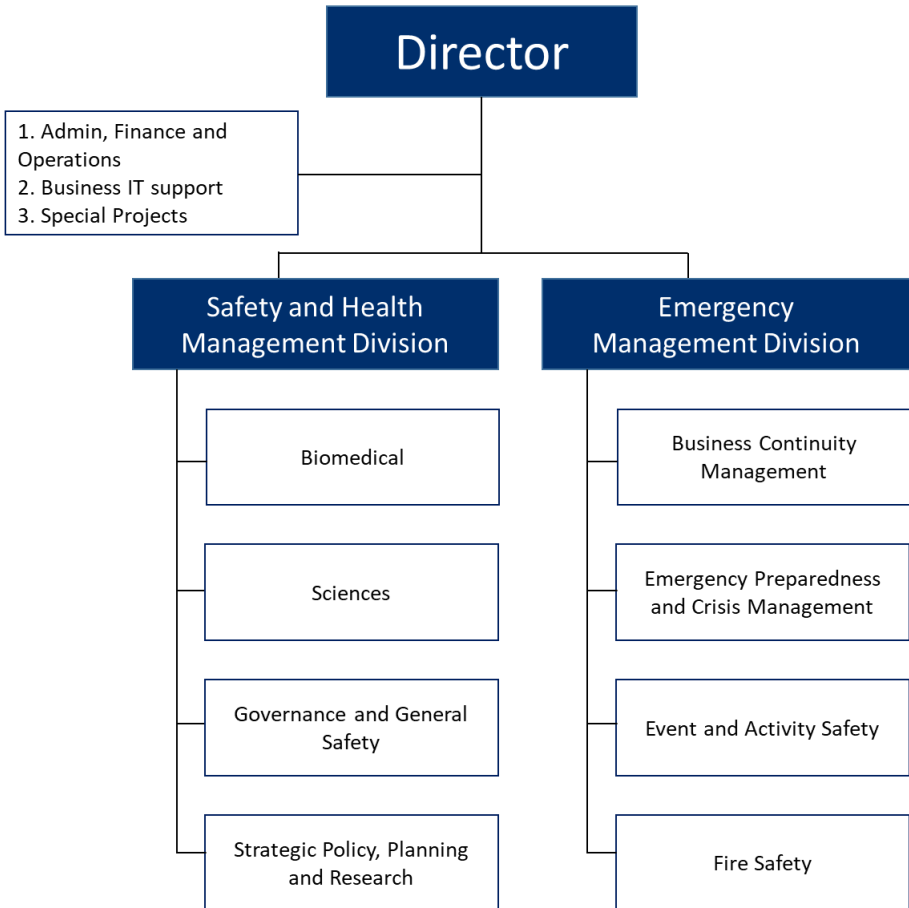


Dr Peck Thian Guan
Director



Our Service Creed

OUR ORGANISATIONAL STRUCTURE IN 2018



OUR MANAGEMENT TEAM



Dr Peck Thian Guan
Director



**Mr Saravanan
Gunaratnam**
Deputy Director
*Head of Safety and Health
Management Division*



Mr Yam Guan Shyh
Deputy Director
*Head of Emergency
Management Division*



Ms Tan Bee Guan
Senior Associate Director



**Mr Ravindran s/o
Sockalingam**
Senior Associate Director



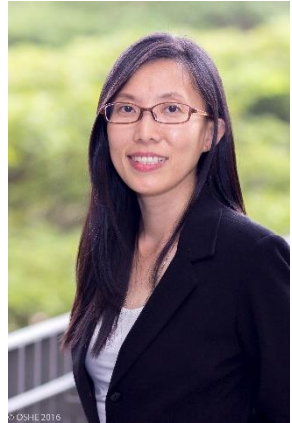
Mr Danny Toh
Senior Associate Director



Mr Gabriel Chen
Associate Director



Ms Gisela Ho
Associate Director



Ms Tan Chuen Hui
Associate Director

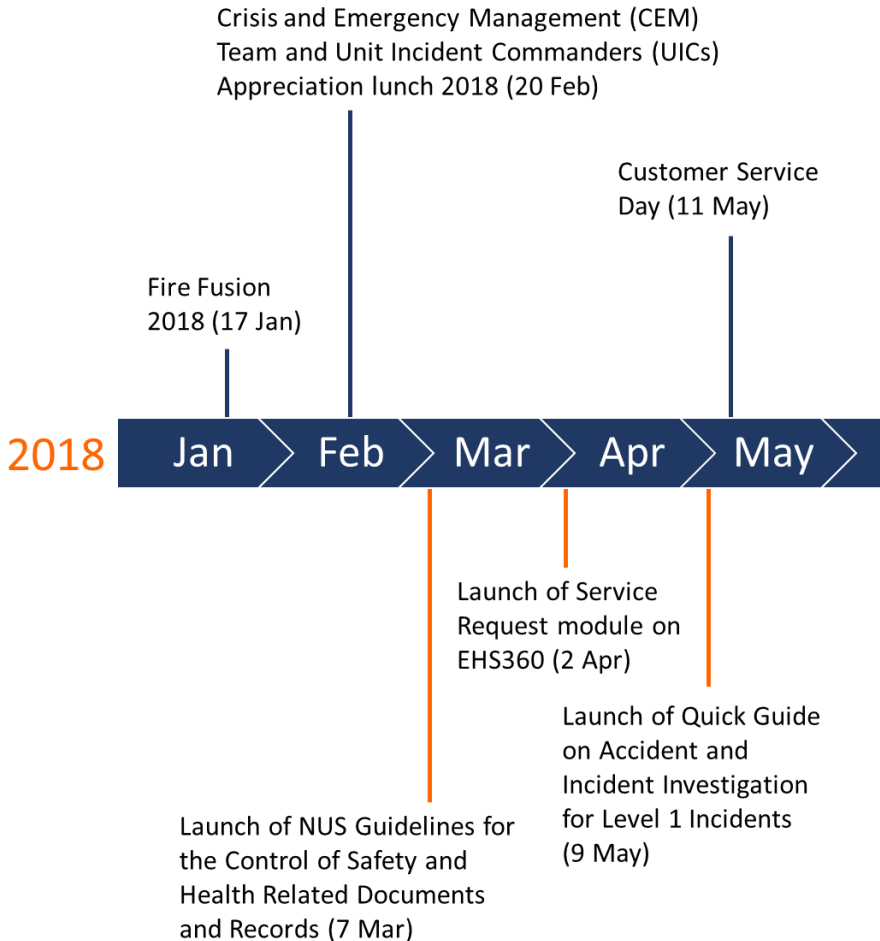


Dr Lim Cheh Peng
Senior Safety and Health
Manager



Mr Jedison Ong
Senior Safety and Health
Manager

2018 KEY MILESTONES AND EVENTS



- Events
- Launch of EHS360 module, standards, manual, factsheet and training module

Institutional Biosafety Committee (IBC), Institutional Laboratory Safety Committee (ILSC) and Safety and Health Management Committee (SHMC) appreciation lunch (24 Aug)

Inaugural peer-to-peer workshop for Safety & Health Coordinators (3 Jul)

Rapid Response Team joins Emergency Management Division (12 Nov)

Strategic Planning Day (21 Sep)

CPR Kiosk in University Town (14 Dec)



Launch of Safety and Health Guidelines for 3D Printing (11 Sep)

Launch of NUS Safety and Health Standard for Blood Collection from Humans for Research and Teaching Purposes in NUS Premises (29 Jun)

Launch of Training Module "Conducting Incident Investigation and Root Cause Analysis" (OSHG09) (8 Nov)

Launch of Quick Guide on Safe Handling of Non-Human Primate (NHP)-Derived Materials (20 Jun)

KEY SAFETY & HEALTH HIGHLIGHTS IN 2018

OSHE continually finds ways, working in partnership with faculties, schools and research centres, to raise the general awareness of safety, health and emergency preparedness and assists the NUS community in achieving compliance to prevailing safety and health regulations and standards.

1. Incident Rates

The number of reportable incidents remained low at less than 25% of the industry average for the year. There was also a significant reduction in non laboratory-based incidents.

2. New EHS360 modules (Service Request)

The Service Request module was launched on 02 Apr 2018 to facilitate request submission of the following nature:

- a. General safety and services
- b. Industrial hygiene monitoring
- c. Radiation waste disposal

3. New e-learning training module on IVLE

On 08 Nov 2018, a new e-learning training module was launched to educate the NUS community of the steps to conduct incident investigation and root cause analysis.

4. New standards and enhancement of existing standards

The following new standard/ guidelines/ quick guides were published in 2018:

- a. NUS Guidelines for the Control of Safety and Health Related Documents and Records

- b. Quick Guide on Accident and Incident Investigation for Level 1 Incidents
- c. Quick Guide on Safe Handling of Non-Human Primate (NHP)-Derived Materials
- d. NUS Safety and Health Standard for Blood Collection from Humans for Research and Teaching Purposes in NUS Premises
- e. Safety and Health Guidelines for 3D Printing

As part of continual improvement in OSHE, the following existing standards were revised and updated:

- a. NUS Laboratory Design Standard
- b. NUS Laboratory Biorisk Management Manual
- c. NUS General Laboratory Safety Manual
- d. NUS Safety and Health Management System Standard for Departments Part B: Guidance Notes

5. NUS biological training module harmonisation between NUS, Nanyang Technological University (NTU) and SingHealth

The NUS Biosafety for BSL-2 Laboratories (OSH BIO08) e-learning training module was harmonised with the training courses in NTU and SingHealth since 01 Aug 2018, under the 'Harmonisation of Safety Training' scheme established by the national Working Group on Safety & Health in Higher Education and Research Sector. This scheme facilitates the mutual recognition of safety training courses across Institutes of Higher Learning to minimise repetitive safety training.

6. NUS Rapid Response Team (RRT)

Seven RRT members were transferred from the Office of Campus Security (OCS) to OSHE on 12 Nov 2018. With RRT and the fire safety programme housed in the same department, the RRT members can take part in more upstream work of fire prevention, thereby improving their effectiveness in crisis prevention and productivity.

SAFETY AND HEALTH IN NUS

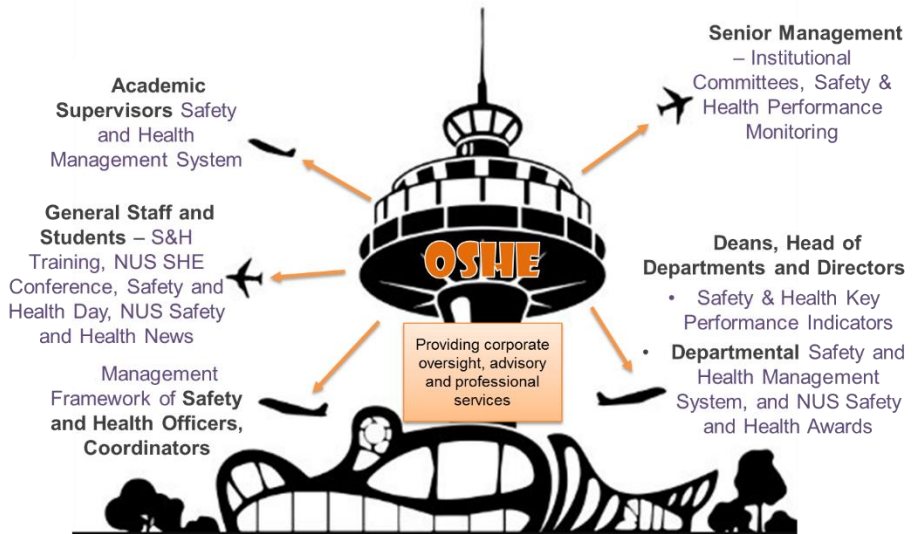
OSHE provides a wide range of safety, health and emergency-related services to the NUS community and engages staff/students at every level to facilitate a safe and disaster-resilient university.



Safety and Health Management Division is responsible for facilitating the building of a positive safety, health and environmental culture and learning experience for all NUS staff and students through the adoption of safety & health best practices and systems.

This is achieved through the implementation of a safety and health management system across NUS departments and faculties.

Emergency Management Division equips NUS staff and students with the knowledge and tools so that they can efficiently and effectively plan and organise their activities and events safely, and manage crisis and emergency situations expediently when they happen.



360-Degree Approach

OSHE takes on a 360-degree approach to managing safety, health and environmental compliance in NUS. OSHE provides corporate oversight, advisory and professional services while engaging all stakeholders to take ownership of safety in the campus.

Engagement with Senior Management

Secretariat to NUS Institutional Committees

OSHE provides secretariat support to several institutional safety and health committees, namely the Institutional Biosafety Committee (IBC), the Institutional Laboratory Safety Committee (ILSC), the Safety and Health Management Committee (SHMC) and the Business Continuity Management Committee (BCMC).



Institutional Biosafety Committee (IBC) meeting on 02 Feb 2018, chaired by Prof Barry Halliwell.

Meeting with New Deans, Heads of Departments (HoDs) and Directors

Deans, HoDs and Directors have a key responsibility in building a positive safety culture in their respective units. OSHE meets all new key management appointment holders to share with them the University's safety & health management system and how OSHE can support them to achieve their safety & health goals.

In 2018, OSHE met the following new key appointment holders:

Senior Management	University Administration
Mr John Wilton, Deputy President (Admin & Finance)	Office of the President
Prof Chen Tsuhan, Deputy President (Research and Technology)	Office of the Deputy President (Research and Technology)
Mr Tan Kian Woo, Vice President (Finance)	Office of Financial Services
Ms Tan Yee Deng, Vice President (Human Resources)	Office of Human Resources
Deans and Directors	Faculty / Department / Research Institutions / Research Centres
Prof Lim Chwee Teck, Director	Biomedical Institute for Global Health Research and Technology (BIGHEART)
Dr Yasmina Arditi Paramastri, Acting Director	Comparative Medicine
A/P Paul A Macary, Director	Life Sciences Institute
Prof Teo Yik Ying, Dean	Saw Swee Hock School of Public Health

Engagement with Safety and Health Appointment Holders

Safety and Health Coordinator (SHC) trainings

To enhance the competency of our Safety and Health Coordinators, the following workshops and courses were conducted for them in 2018.

Trainings Conducted	Dates
Biospill Response Training for Safety and Health Coordinators	10-Apr-18
	11-Sep-18
Chemical Response Training for Safety and Health Coordinators	20-Mar-18
	14-Aug-18
Risk Management Training for Safety and Health Coordinators (Laboratories)	28-Feb-18
Risk Management Training for Safety and Health Coordinators (General Workspaces)	13-Mar-18
Risk Management Training for Safety and Health Coordinators (Laboratories & General Workspaces-merged)	16-Oct-18
Workshops Conducted	Date
Safety and Health Coordinators Peer-to-Peer Workshop	3-Jul-18



Mr Daniel Wong conducting Chemical Spill Response Training to Safety and Health Coordinators on 14 Aug 2018.

Fire Fusion 2018 (17 Jan 2018)

The annual Fire Fusion is to recognise the contributions of fire safety teams campus-wide. The building safety teams established and maintained an excellent performance in fire safety in their respective buildings, and they were presented certificates and token of appreciation by the NUS Senior Management.



Platinum Award Winners (Group 1) with NUS President, Prof Tan Eng Chye.



Platinum Award Winners (Group 2) with NUS President, Prof Tan Eng Chye.



Gold Award Winners with Senior Vice President (Campus Infrastructure), Prof Yong Kwet Yew.



Silver Award Winners with Director of Office of Safety, Health and Environment, Dr Peck Thian Guan.

Crisis and Emergency Management (CEM) Team and Unit Incident Commanders (UICs) Appreciation Lunch 2018 (20 Feb 2018)

The NUS CEM team and UICs are in charge of handling emergencies in NUS. The annual appreciation lunch allows the CEM team and UICs to meet in a “non-crisis” environment to foster stronger working relationships. The appreciation lunch is also to recognise and thank former members of the CEM Team and UICs for their contributions as well as to welcome new members.

At the appreciation lunch this year, Dr Peck and Ms Agnes Koh (UHC) shared from their personal experience on crisis management.



Dr Peck Thian Guan's opening address during the appreciation lunch.



Ms Agnes Koh from University Counseling Services (UCS) shared on UCS services.



Ms Agnes Koh, Mr Yam Guan Shyh and Prof Yong Kwet Yew at the appreciation lunch.



Appreciation lunch for CEM team and UICs.

Safety and Health Coordinators (SHCs) Peer-to-Peer Workshop (03 July 2018)

OSHE organised the inaugural peer-to-peer workshop for SHCs. The purpose of the workshop was to facilitate cross learning among the SHCs from academic, research and administrative departments.



Mr Enrico Varella from Integrative Learning Corporation Pte Ltd (center, front of picture) with Safety & Health Coordinators from various faculties, schools, departments, research institutes and research centres at NUS.



Safety and Health Coordinators learning about facilitation techniques.



Lively brainstorming session among the Safety and Health Coordinators.

Engagement with NUS Staff and Students

OSHE staff play a multi-faceted role in supporting faculties, schools and research institutes/centres for their emergency drills, safety & health trainings and promotional events.

Faculties, Schools, Research Institutes and Departments organise events to raise the awareness of safety and health at the workplace. The following safety & health events were held in 2018 with the support of OSHE staff.

Safety & Health Events	Dates
Tropical Marine Science Institute (TMSI) Safety Day	19-Jan-18
NUS Medicine Safety Day	26-Jul-18
Department of Microbiology and Immunology Safety and Health Day	26-Sep-18
Technology Lab (T-Lab) Building Safety Day	27-Sep-18
Chemical & Biomolecular Engineering Safety and Health Day	27-Sep-18
Science Safety Day	28-Sep-18
Department of Electrical & Computer Engineering Safety and Health Day	28-Sep-18
Department of Medicine Safety Day	8-Oct-18
Centre for Life Sciences (CeLS) & Brenner Centre Safety Day	26-Oct-18
Solar Energy Research Institute of Singapore (SERIS) Safety Day	21-Nov-18
Mechanical Engineering Safety Day	28-Nov-18
NUS Medicine Health & Wellness Week 2018	10 to 14-Dec-18



Faculty of Science Safety Day on 28 Sep 2018.



OSHEians at NUS Medicine Safety Day on 26 Jul 2018.



Mr Saravanan Gunaratnam with other NUS staff at a Healthy Campus Initiative workshop, organised by MOH Office for Healthcare Transformation (MOHT).



Prof Armin Aberle (second from left) Solar Energy Research Institute of Singapore (SERIS) CEO, with OSHE staff, at their 10th anniversary celebration.



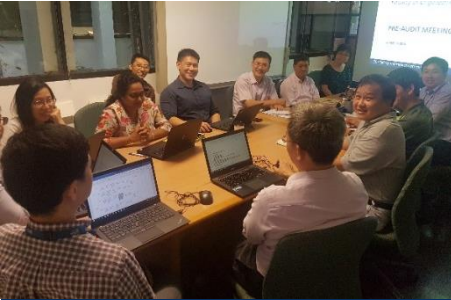
NUS staff and students attending a hands-on fire safety training.



Mr Ngeow Kao-Peng discussing on construction safety with stakeholder.



Fire drill at Duke-NUS BSL3 conducted by Singapore Civil Defence Force (SCDF) on 27 Aug 2018.



OSHE staff together with representatives from Department of Electrical & Computer Engineering at a pre-audit meeting.



Information session on asbestos by Ms Tan Chuen Hui to staff and students at St. John's Island National Marine Laboratory and Tropical Marine Science Institute.



MOH Biosafety Level 3 (BSL3) certification of NUS Medicine BSL3 Core Facility on 26 Jul 2018.



UCI learning journey sharing session by Dr Wong Su Ee on Transformation for the Future: Healthy Workforce, Safe Workplaces on 28 Nov 2018.

Workshops, Trainings and Drills Conducted:

Workshops and Trainings Conducted	Dates
Safe Handling of Non-Human Primates	9-Feb-18
	14-May-18
	15-May-18
	30-May-18
	6-Jul-18
	15-Aug-18
	21-Nov-18
Workplace Safety and Health (WSH) Committee Training	30-Oct-18
Internal Auditor Workshop	27-Mar-18
	26-Jun-18
	13-Sep-18
	13-Nov-18
Combined Drills Conducted with SCDF	Dates
Solar Energy Research Institute of Singapore	28-Feb-18
Duke-NUS Medical School	14-Apr-18
Lee Kong Chian Natural History Museum	7-May-18
NUS Medicine Biosafety Level 3 Core Facility	30-Jul-18



Ms Sheena Shen and Mr Mohammad Fazulee Bin Abdul Rahman coaching participants during the CPR-AED training course.

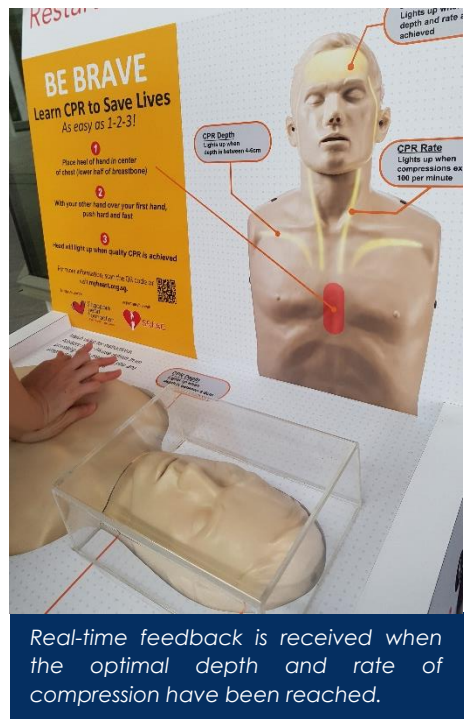


Dr Peck and the Emergency Management Division ensuring safety at the annual NUS Rag & Flag 2018 on 11 Aug 2018.

Bringing CPR to the Community – the CPR Kiosk

The Emergency Management Division collaborated with the Singapore Heart Foundation and Singapore Resuscitation and First Aid Council (SRFAC) to launch a Cardiopulmonary Resuscitation (CPR) self-learning kiosk in NUS. The purpose of the kiosk is to raise awareness of the life-saving skill.

The CPR kiosk was placed in NUS University Town (UTown) on 14 Dec 2018. It will be exhibited in the other parts of campus in 2019.



Engagement with the National and International Community

Working Group on Safety and Health in Higher Education and Research (HER) Sector

Dr Peck Thian Guan chairs the Working Group on Safety and Health in Higher Education and Research (WG HER) Sector. This group is under the auspices of the Workplace Safety and Health Council (WSHC). It was started in 2013 to provide a formal platform for Institutions of Higher Learning and Research Institutes to share safety and health best practices among themselves.



Dr Peck chairing the WG HER meeting on 01 Mar 2018.

Working Group for the Singapore Standard on Fire Safety in Laboratories

Mr Hairulnizam bin Ishak represented NUS in the Working Group for the development of a Singapore Standard on Fire Safety in Laboratories.

NUS also shared its research findings on how laboratory ventilation can affect fire safety, based on the research it had conducted.



Meeting of the Working Group in progress on 07 Nov 2018.

International Organization for Standardization's (ISO) Working Group on Occupational Safety and Health Management System Standard – ISO 45001

Dr Peck Thian Guan was Singapore's representative to the International Organization for Standardization's (ISO) Working Group for the development of the ISO 45001 standard on Occupational Health and Safety Management System.

The standard was published in Mar 2018. Dr Peck was called upon to share the new standard to the Singapore industry.



Dr Peck Thian Guan presenting the new ISO standard at a Singapore Institute of Safety Officers' conference on 2 Nov 2018.

Okinawa Institute of Science and Technology Graduate University (OIST) (19 to 20 Nov 2018)

OSHE staff visited OIST before attending the 5th Asian Conference on Safety and Education in Laboratory. There was mutual sharing of safety and health best practices between the two universities.



Dr Toshinori Tanaka (Section Leader, Occupational Health and Safety Section, OIST) (third from right) and OIST staff with OSHE staff and Singapore delegates from Nanyang Technological University and National Research Foundation after the sharing session.

Conferences and Networking

OSHE staff attend relevant conferences and share NUS safety and health programmes with the wider community, both locally and overseas.

The 5th Asian Conference on Safety and Education
Annual Meeting of the Academic Consociation of Environmental Safety and Waste
21-22 November 2018 Okinawa Institute of Science and Technology Graduate University



OSHE staff attended and presented at the 5th Asian Conference on Safety and Education in Laboratory (ACSEL) at Okinawa, Japan (21 to 22 Nov 2018).



Mr Saravanan Gunaratnam delivered an oral presentation at the 13th Public Health and Occupational Medicine (PHOM) Conference on 04 Oct 2018.



Dr Lim Cheh Peng delivering a presentation on biosafety at Singapore University of Technology and Design (SUTD) Safety Day on 20 Jul 2018.



OSHEians at the Singapore Workplace Safety & Health (WSH) Conference from 29 to 30 Aug 2018.



Mr Saravanan Gunaratnam and Dr Lim Cheh Peng together with other Singapore delegates attending the 32nd International Congress on Occupational Health, organised by International Commission on Occupational Health (ICOH) from 29 Apr to 4 May 2018.

LEAN AND GREEN



Annual savings of
>\$150,000

A number of initiatives were implemented by OSHE to reduce the administrative workload for the NUS community in achieving compliance to regulations and NUS standards.

1. Licence wavier for users of confocal microscope

In 2018, the Radiation Protection and Nuclear Science Department, National Environment Agency (NEA-RPNSD) agreed to NUS' proposal to waive the licence for users of confocal microscopes with a Class 3B or 4 laser that has a laser power of less than 5mW at the focal point.

This would translate to sufficient cost and productivity savings for NUS researchers.

2. Harmonisation of safety training with other institutions

The Working Group on Higher Education and Research (WG HER) developed the 'Harmonisation of Safety Training' scheme among its members last year. In 2018, OSHE's module *Biosafety for BSL-2 Laboratories (OSHBIO08)* was successfully harmonised with that of Nanyang Technological University (NTU), and SingHealth. This increases the research productivity of staff/students among these three institutions participating in cross-institution research. Under this scheme, researchers who have attended training in one participating institution need not undergo the same training in another institution. This minimises repetitive safety training and allows the researcher to commence work sooner.

3. Reduction of annual Safety and Health Management System (SHMS) audits for BSL3/ ABSL3 facilities

The frequency of SHMS audit for BSL3/ABSL3 facilities has been reduced from yearly to once every 3 years. Given that both the

facilities have matured in their SHMS and maintained positive safety and health performance, the reduction of audits will reduce the administrative work without compromising on safety.

4. Online request for OSHE services

Requests by departments for OSHE's safety and services such as Industrial Hygiene Monitoring and Radiation Waste Disposal were migrated to online forms and consolidated into an existing integrated IT system, EHS360. This reduces the time needed for the application and monitoring of such services.

5. Revision of the NUS Laboratory Biorisk Management Manual

The NUS Laboratory Biorisk Management Manual has undergone major revisions to remove duplicate information, integrate existing bio-related standards/standard operating procedures and provide clarity on mandatory requirements. This offers a concise manual for the research community with a reduction from 182 to 46 pages.

6. Process Review Committee (PRC)

Headed by Mr Saravanan Gunaratnam, the PRC is one of five committees formed to address feedback arising from the Employee Engagement Survey (EES). PRC aims to re-engineer processes, not just in OSHE, but across three other offices in UCI. One of the major initiatives includes appointing Quality Service Managers to drive the quality assurance management plan and the promotion of organisational excellence. Dr Peck is the advisor to PRC, with Dr Lim Cheh Peng as member and Dr Christine Hu as the secretariat.



First PRC meeting was held on 27 Feb 2018.

OSHE YEAR IN REVIEW

OSHE Events

Customer Service Day (11 May 2018)

The emphasis at the OSHE's Customer Service Day was on NUS Ways of Working (WoW), such as Think NUS, as well as reducing bureaucracy for improved customer service and promoting continuous life-long learning of staff.



Dr Peck sharing on Lean Six Sigma and the reduction of waste.



Group discussion on how to translate the NUS Ways of Working (WoW) into practical examples.

Strategic Planning Day (21 Sep 2018)

OSHE reviews the current year's performance and prioritises resources for the following year. At the Strategic Planning Day on 21 Sep 2018, the respective groups shared on their proposed 2019 work plan. To foster camaraderie and team building, OSHE's Social Committee introduced a game that incorporated OSHE's NASI+ values.



Dr Peck sharing the importance of adaptability and resilience in a period of rapid change.



Dr Sheela Reuben sharing on NUS Ways of Working (WoW).

Developing Our People

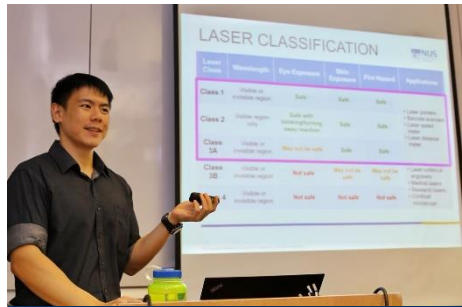
The Office of Human Resources (OHR) promotes the 70:20:10 learning model for learning and development, which OSHE continues to adopt. This model advocates that 70% of knowledge should be acquired through learning on the job, 20% from mentorship, and 10% from formal education.

OSHE's Safety and Health Officers (SHOs) participate in internal and external trainings to be equipped with technical skills and build competencies in various domains. In 2018, there were three internal trainings conducted by subject-matter-experts of the respective safety programmes at OSHE:

Trainings	Dates
Getting to the Root Cause of Accidents (Trainer: Goh Keng Beng)	22-Feb-18
Lab Design 101 (Trainer: Lau Kwok Siong)	17-Apr-18
Laser Safety (Trainer: Francis Zheng)	21-Aug-18



OSHE staff discussion during the "Getting to the Root Cause of Incidents" training.



Mr Francis Zheng's conducting laser safety training.

University Campus Infrastructure Events

OSHE is part of the University Campus Infrastructure (UCI) cluster, led by the Senior Vice President (Campus Infrastructure), Prof Yong Kwet Yew. OSHE works closely with several offices in this cluster to provide services and solutions to the campus community. In 2018, OSHE supported a number of UCI events.



OSHEians and their family members participating at one of the satellite events of NUS Day of Service, organised by UCI on 01 Sep 2018.



Ms Louise Ng manning a booth at the NUS for Climate Action Roadshow, organised by UCI on 17 to 18 Oct 2018.



OSHEians supporting the Singapore World Water Day, organised by NUS Water Management Task Force on 22 Mar 2018.



Social and Wellness Events

The Social Committee in OSHE organises events for OSHE staff to interact and bond.

OSHEians participate actively in social events organised by both the OSHE social committee and UCI's Recreation, Leisure and Active Committee (ReLAC).



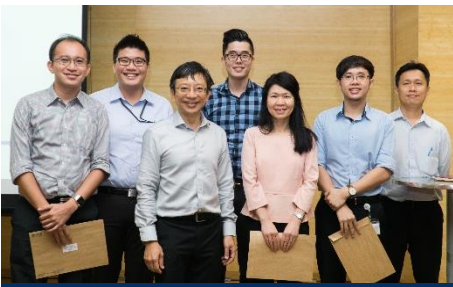
Social Committee members 2018/2019. Front row L to R: Ms Louise Ng and Ms Zhou Qian. Back row L to R: Mr Daniel Wong, Dr Vernon Seow and Mr Goh Keng Beng. Absent from picture: Mr Adam Wong and Ms Gisela Ho (advisors)



Ms Joyce Ng winning the Chinese New Year lucky draw at the CNY get together organised by UCI ReLAC on 21 Feb 2018.



OSHEians at the UCI Teambuilding event organised by UCI ReLAC on 31 Jul 2018.



OSHE 2018 Long Service Award recipients with Dr Peck Thian Guan.



Dr Peck Thian Guan (fifth from left) and Mr Leong Chee Meng (extreme right) with UCI colleagues at the UCI Bowling event on 21 Nov 2018.



OSHEians at Escape Hunt event organized by OSHE's Social Committee on 12 Dec 2018.



OSHEians enjoying the King of Fruits during a durian makan session organised by UCI on 27 Jul 2018.



Mr Lionel Yap conducting a chair yoga session for OSHE staff on 20 Apr 2018.



Mr Ravindran s/o Sockalingam and Mr Jedison Ong participating at the UCI Teambuilding games on 31 Jul 2018.



Dr Wong Su Ee representing OSHE to receive the second prize in the Office Christmas Decoration competition.



Mr Goh Keng Beng receiving the first prize in the UCI Bowling event on 21 Nov 2018.





OSHE staff discussing process pain points with the UCI Innovation Excellence Transformation Unit (iETU) with the aim of achieving organisational excellence.



Mr Gabriel Chen and Mr Leong Chee Meng performing inspection on a gas detection system on 31 Oct 2018.



Dr Sheela Reuben answering queries by auditor from Agri-Veterinary Authority of Singapore (AVA), Dr Denyse Khor, during the annual audit by AVA for the renewal of the institutional Licence to Possess Veterinary Biologics (LPVB).



Mr Mohammed Khoirul Bin Mohd Noor demonstrating the use of fire extinguisher at the annual Ventus fire drill on 24 July 2018.



OSHEians with NUS President, Prof Tan Eng Chye, at the National Day Observance Ceremony on 08 Aug 2018.



OSHE Walk-in Clinic during the School of Medicine Safety Day on 26 Jul 2018.

RESULTS AND STATISTICS

Key OSHE statistics for 2018

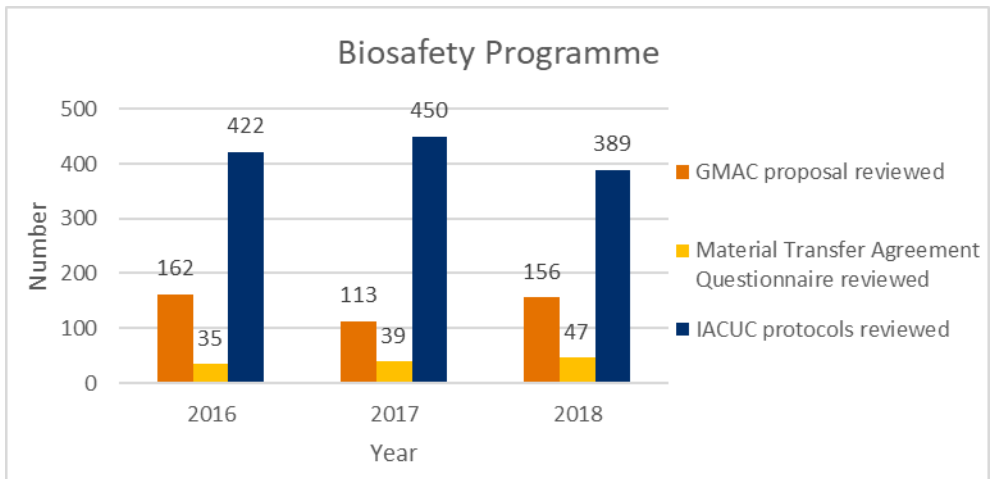


Operational Results

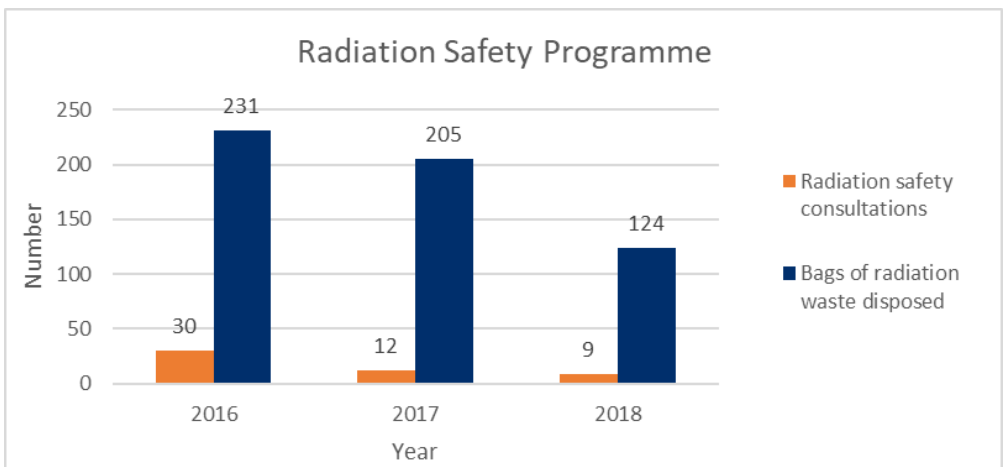
Trainees Attending OSHE Courses

Category of trainings	Specific training name	No. of Trainees		
		2016	2017	2018
Induction	Laboratory Safety Induction Training	1392	1530	2226
	Chemical Safety	4101	3489	3948
Chemical	Safe Use & Handling of Hydrofluoric Acid	234	178	125
	Safe Use & Handling of Pyrophoric Chemicals	274	219	220
	Semi-Quantitative Risk Assessment	-	247	265
	Chemical Spill Response	766	702	578
	Chemical Spill Response (Hands-On)	-	31	11
	Biosafety for BSL-1 Laboratories	-	118	1279
Biological	Biosafety for BSL-2 Laboratories	2894	2302	2121
	Safe Handling of Human Tissue and Fluids	1636	1159	977
	Safe Needle Usage in Research Laboratories	931	1549	1133
	Safe Handling of Non-Human Primate (Macaque) Derived Materials (Classroom)	-	49	21
	Risk Management for BSL-3 Facilities (classroom)	-	26	-
	Biosafety Legislations & Guidelines	282	170	122
	Biological Spills and Emergency Response	572	490	424
	Biological Spills and Emergency Response (Hands-On)	-	24	6
	Laser Safety Training	903	883	913
	Radiation	Safe Handling of Radioactive Materials	-	58
Safe Handling of X-Ray Machines		-	124	359
Basic MRI Safety Training		56	74	52
MRI Safety Training for Operators		45	25	29
Respiratory Protection Programme Training for First-Time Users		483	540	555
General	Respiratory Protection Programme Training for Returning Users	104	206	493
	Risk Management for Laboratories	257	782	1258
	Risk Management for General Workplaces	38	104	119
	Risk Management for Laboratories (Hands-On)	-	71	9
	Risk Management for General Workplaces (Hands-On)	-	41	6
	Field Research Safety	-	55	240
	Conducting Incident Investigation	-	-	12
	NUS Office Ergonomics Training	-	93	79
Ergonomics	NUS Laboratory Ergonomics Training	-	89	105
	Suicide First Responder Awareness Course	45	24	13
Mental Health	Mental Health First Aid	-	-	28
	Customised Fire Safety Training	-	2938	2971
Fire Safety	Fire Safety (IVLE)	-	-	3422
	Fire Safety Education Course	544	522	347
	Fire Warden Training Course	245	174	202
	Fire Safety Coordinator Course	45	29	35
	Fire Safety Refresher Course	260	142	60
	Crisis Management (Business as Usual)	59	46	48
Emergency Response	Students' Events / Activities Safety & Crisis Management Workshop	367	494	188
	CPR/AED	757	745	617
Appointment-Based	Workplace Safety and Health (WSH) Committee (General Workplace)	46	24	-
	Workplace Safety and Health (WSH) Committee (Laboratories)	32	7	-
	Workplace Safety and Health Committee Training	-	-	18
	Safety and Health Management System (SHMS) - Tools & Techniques for Development, Implementation and Maintenance of SHMS	-	23	-
	Internal Auditor Workshop for S&H Management System	-	106	67

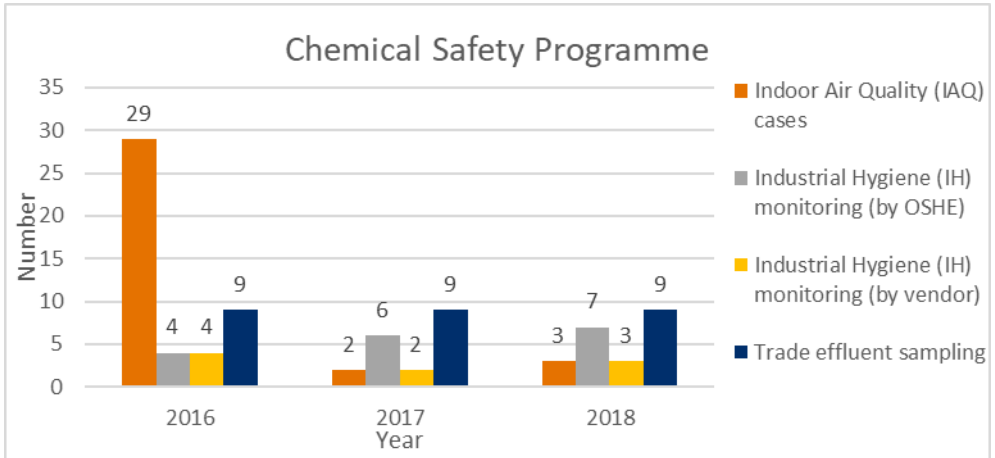
Biosafety Programme



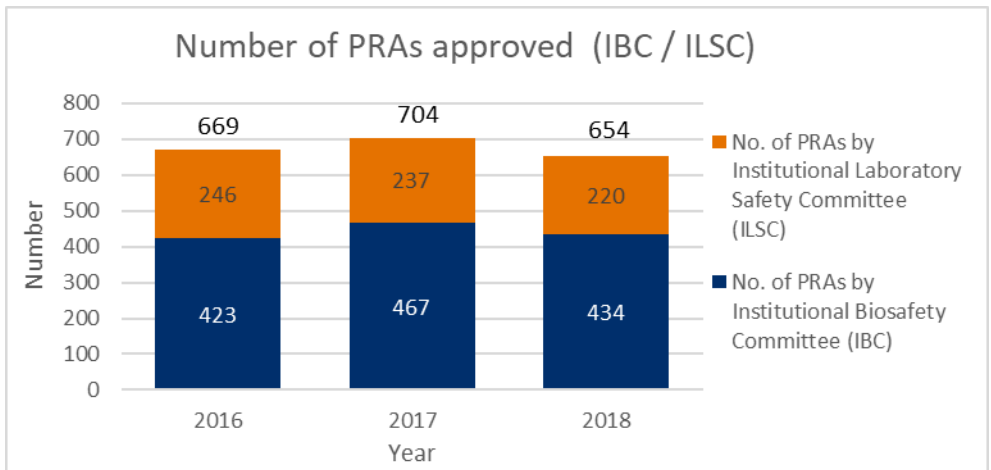
Radiation Safety Programme



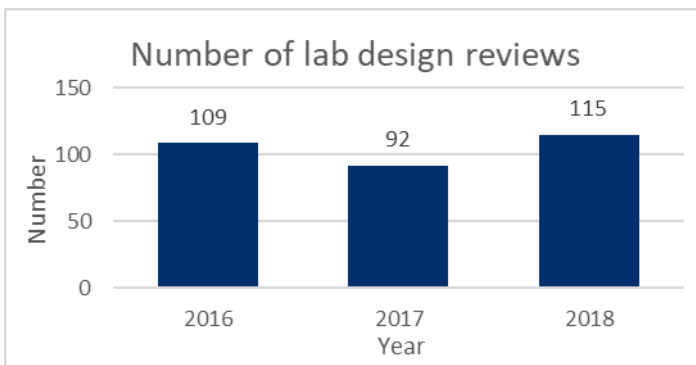
Chemical Safety Programme



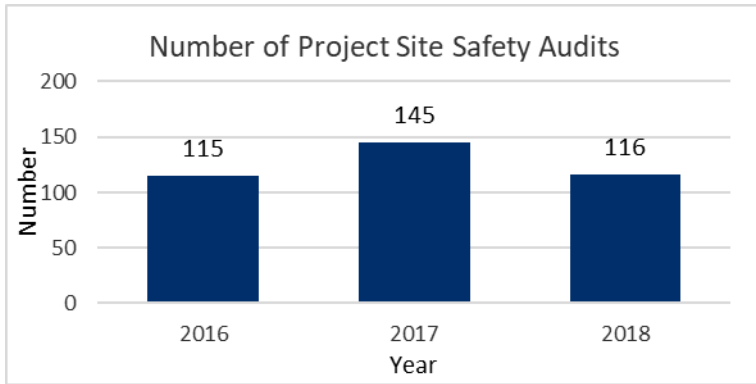
Project Risk Assessments (PRAs)



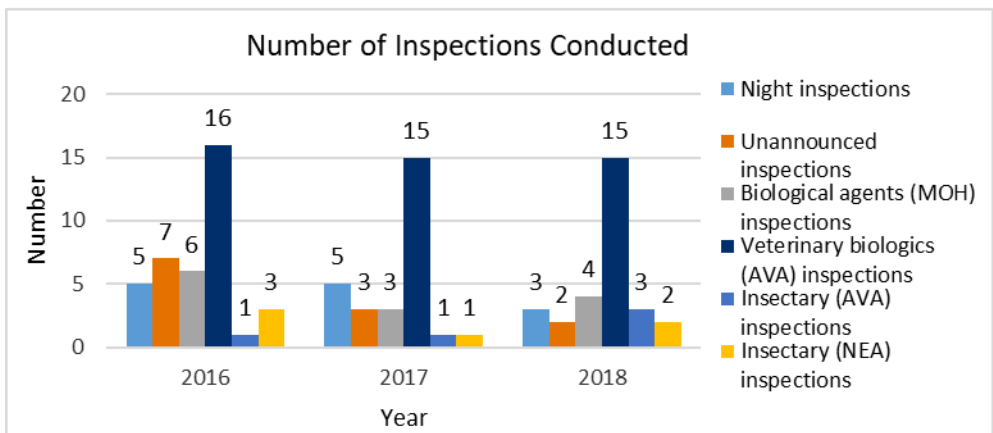
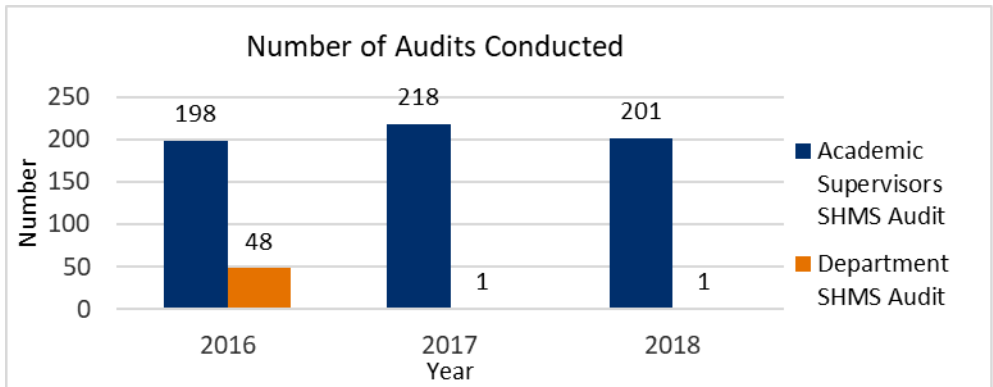
Laboratory Design Reviews



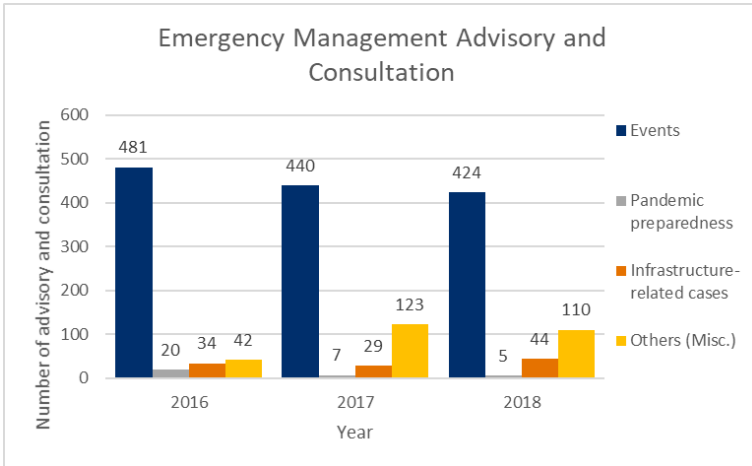
Construction Project Site Safety Audits



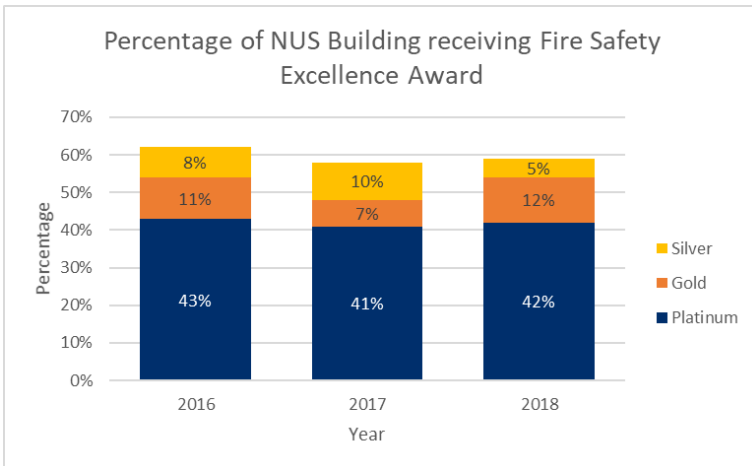
Audits and Inspections



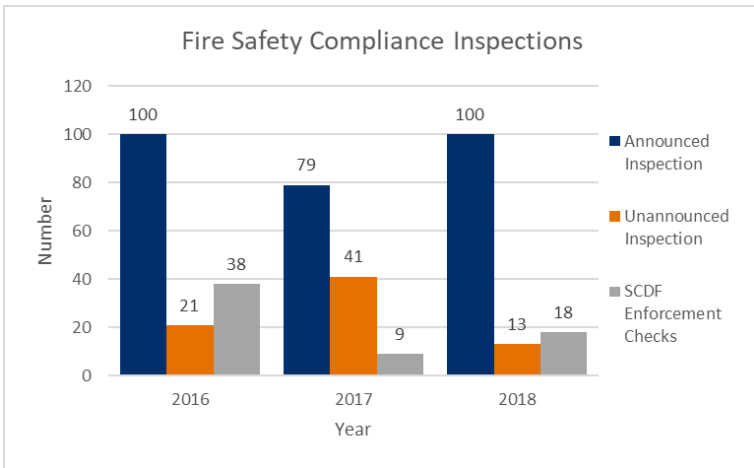
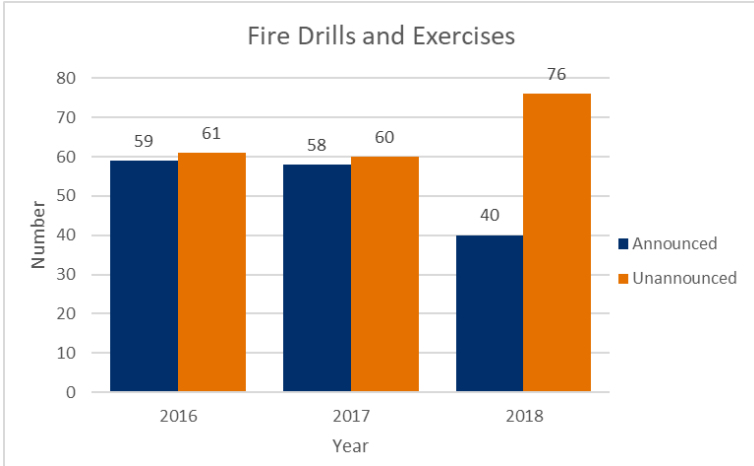
Emergency Management Advisory and Consultation



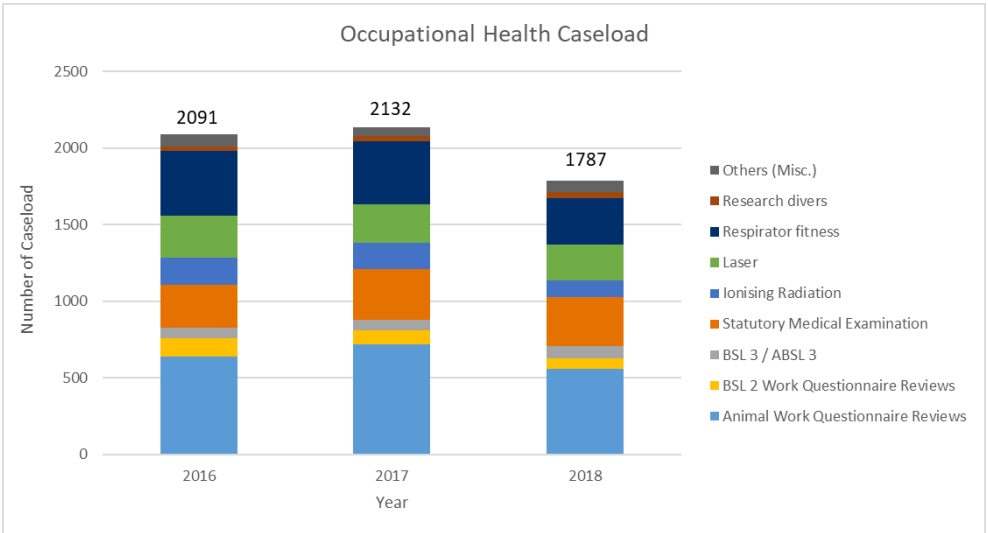
Fire Safety Excellence Award



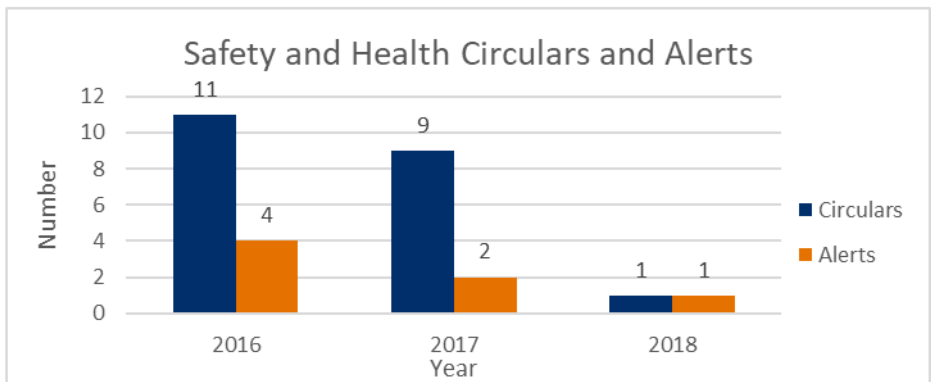
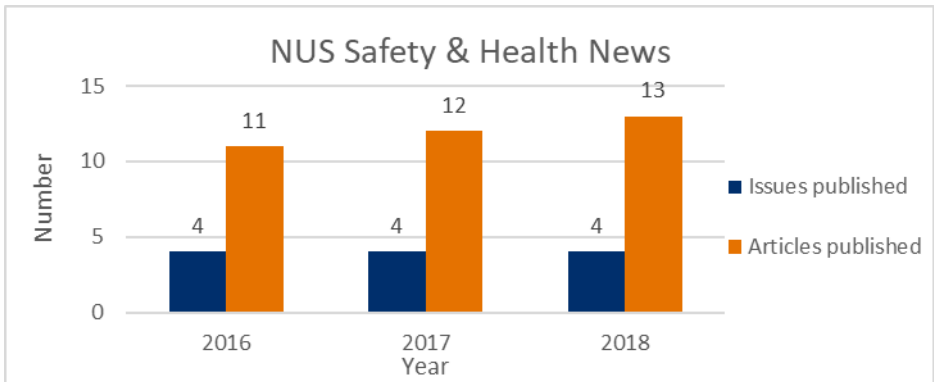
Fire Drills and Inspections



Occupational Health Caseload



NUS Safety and Health Newsletter

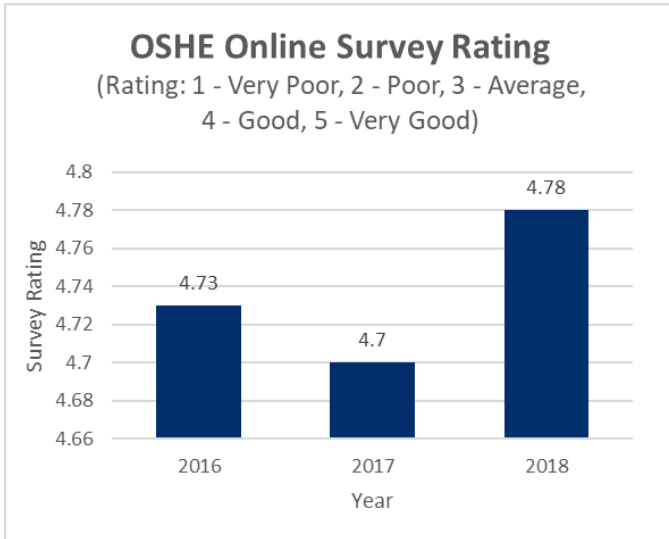


Customer Results

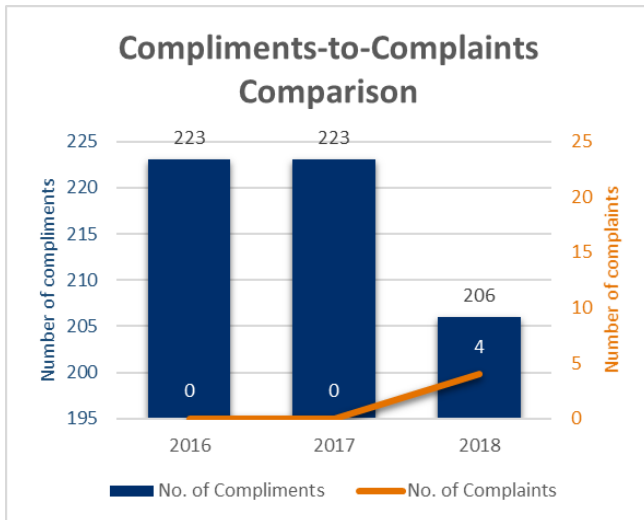
Customer Satisfaction Scores for Training Courses

Category of trainings	Specific training name	Ratings (1-7 scale)		
		2016	2017	2018
Induction	Laboratory Safety Induction Training	5.92	6.09	5.90
Chemical	Chemical Safety	5.85	5.97	6.13
	Safe Use & Handling of Hydrofluoric Acid	5.57	6.64	6.13
	Safe Use & Handling of Pyrophoric Chemicals	5.41	6.15	6.15
	Semi-Quantitative Risk Assessment	-	6.25	6.07
	Chemical Spill Response	5.92	6.29	6.36
	Chemical Spill Response (Hands-On)	-	6.31	6.17
Biological	Biosafety for BSL-1 Laboratories	-	5	6.12
	Biosafety for BSL-2 Laboratories	5.48	5.78	6.07
	Safe Handling of Human Tissue and Fluids	5.36	6.18	5.72
	Safe Needle Usage in Research Laboratories	5.71	6.19	6.15
	Safe Handling of Non-Human Primate (Macaque) Derived Materials (Classroom)	-	6.45	6.64
	Risk Management for BSL-3 Facilities (classroom)	-	5.14	-
	Biosafety Legislations & Guidelines	5.47	6.29	6.46
	Biological Spills and Emergency Response	5.63	6.12	5.85
	Biological Spills and Emergency Response (Hands-On)	-	6.72	6.15
	Lasers Safety Training	5.97	6.24	6.17
Radiation	Safe Handling of Radioactive Materials	-	6.02	6.03
	Safe Handling of X-Ray Machines	-	6.25	6.00
	Basic MRI Safety Training	6.61	5.5	6.33
	MRI Safety Training for Operators	6.21	7	5.86
	Respiratory Protection Programme Training for First-Time Users	5.96	6.46	6.09
General	Respiratory Protection Programme Training for Returning Users	5.77	5.63	5.74
	Risk Management for Laboratories	5.77	5.95	5.88
	Risk Management for General Workplaces	5.83	6.26	6.17
	Risk Management for Laboratories (Hands-On)	-	5.67	6.02
	Risk Management for General Workplaces (Hands-On)	-	5.91	6.63
	Field Research Safety	-	5.95	5.35
	Conducting Incident Investigation	-	-	-
	NUS Office Ergonomics Training	-	5.9	6
	NUS Laboratory Ergonomics Training	-	5.36	5.94
Mental Health	Suicide First Responder Awareness Course	5.91	5.36	6.0
	Mental Health First Aid	-	6.21	-
Fire Safety	Customised Fire Safety Training	-	-	-
	Fire Safety (IVLE)	-	-	-
	Fire Safety Education Course	5.98	-	6.2
	Fire Warden Training Course	6.04	6.06	6
	Fire Safety Coordinator Course	6.09	6.01	6.1
	Fire Safety Refresher Course	6.12	6.42	6.3
Emergency Response	Crisis Management (Business as Usual)	6.15	6.11	6.42
	Students' Events / Activities Safety & Crisis Management Workshop	6.34	6.32	6.66
	CPR/AED	6.75	6.7	6.64
Appointment-Based	Workplace Safety and Health (WSH) Committee (General Workplace)	5.62	5.8	-
	Workplace Safety and Health (WSH) Committee (Laboratories)	5.82	5.86	-
	Workplace Safety and Health (WSH) Committee Training	-	-	5.56
	Safety and Health Management System (SHMS) - Tools & Techniques for Development, Implementation and Maintenance of SHMS	-	-	-
	Internal Auditor Workshop for S&H Management System	-	-	5.92

Audit Survey Rating

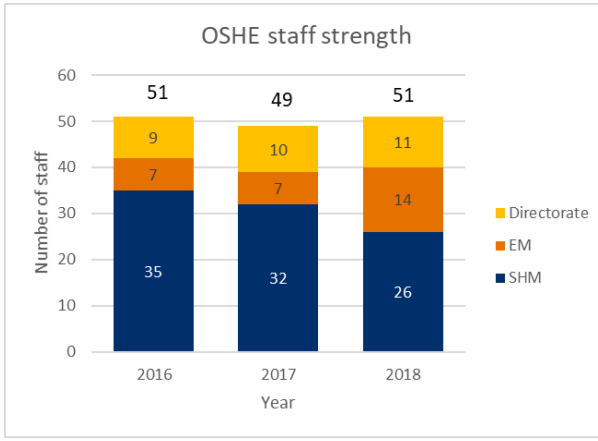


Compliments and Complaints



People Results

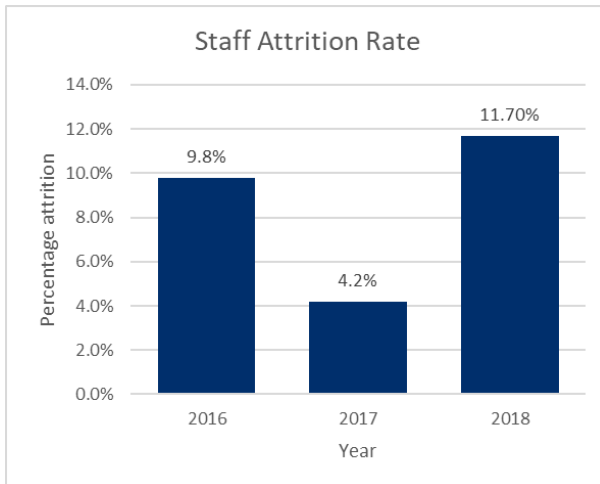
OSHE Staff Strength



Directorate consists of:

1. Director
2. Personal Assistant to Director
3. Admin, Finance and Operations
4. Business IT Support

OSHE Staff Attrition Rate



Social and Wellness Programme

Dates	Event	Organiser
21-Feb-18	ReLAC Chinese New Year Celebration	UCI
20-Apr-18	Stretching/Yoga and Self-defence course	OSHE Social Committee
21-Jun-18	ReLAC Hari Raya Celebration	UCI
16-Jul-18	Latte art workshop	UCI
27-Jul-18	Durian event	UCI
31-Jul-18	UCI teambuilding event	UCI
1-Sep-18	NUS day of Service	UCI
20-Sep-18	Photography workshop	UCI
2-Nov-18	Indian Heritage centre	UCI
21-Nov-18	Bowling event	UCI
5-Dec-18	ESCAPE	OSHE Social Committee
11-Dec-18	ReLAC Christmas Celebration	UCI

Professional Certifications of OSHE Staff

Professional Certification	Number
Registered Fire Safety Manager (SCDF)	16
Registered Safety Officer (MOM)	16
OHSAS 18001 Lead Auditor	11
Biosafety Coordinator (MOH)	10
Advanced Certificate in Training and Assessment (WSQ)	6
Noise Monitoring and Control Officer (WSQ)	6
ISO 14001 Lead Auditor	5
Business Continuity Certified Expert (BCMI)	3
Environmental Control Officer (NEA)	3
Registered Biosafety Professional (USA)	3
Biosafety Professional Certification (IFBA)	3
Senior Fire Safety Manager (SCDF)	2
Lean Six Sigma (Yellow Belt)	2
Lean Six Sigma (Green Belt)	2
Radiation Safety Officer (ANSTO)	2
Laser Safety Officer (UNSW)	2
Certified Instructor for Mental Health First Aid (Singapore)	2
Crisis Management Certified Expert (BCMI)	1
Associate Member of Business Continuity Institute (AMBCI)	1
Certified Industrial Hygienist (CIH, USA)	1

OSHE Staff Supporting International, National and Institutional Committees

Committee	Staff	Role
ISO PC 283 and Development of the ISO Standard on Occupational Health and Safety Management System (ISO 45001)	Dr Peck Thian Guan	Head of Singapore Delegation
SPRING Singapore's Technical Committee on Occupational Safety and Health Management System	Dr Peck Thian Guan	Co-Convenor
International Steering Committee, Asian Conference on Safety and Education in Laboratory	Dr Peck Thian Guan	Member (advisory committee)
	Mr Saravanan Gunaratnam	Member (international steering committee)
Working Group for Development of Singapore Standard : Fire Safety in Laboratories	Mr Hairulnizam bin Ishak	Member
Working Group on Safety & Health in Higher Education and Research Sector (WG HER)	Dr Peck Thian Guan	Chairman
	Mr Saravanan Gunaratnam	Member
	Mr Francis Zheng	Secretariat
SPRING Singapore's Technical Committee on Business Continuity	Mr Yam Guan Shyh	Member
Biorisk Association of Singapore	Dr Tessy Joseph	President
	Dr Rajkumar Ramamoorthy	Treasurer
	Dr Vernon Seow	Asst secretary
	Dr Suzette De Leon	Asst treasurer
APRU Multi Hazard Campus Safety Workshop 2018 Workgroup Committee	Mr Mohammad Fazulee Bin Abdul Rahman	Member
NUS SGSecure Committee (NSC)	Dr Peck Thian Guan	Member
	Mr Yam Guan Shyh	Member
	Mr Ravindran s/o Sockalingam	Secretariat
	Mr Mohammad Fazulee Bin Abdul Rahman	Asst Secretariat
	Ms Wong Thai Jin	Asst Secretariat
Health Campus Initiative (HCI)	Mr Saravanan Gunaratnam	Member
NUS Occupational Health Working Group	Mr Saravanan Gunaratnam	Member
	Dr Lim Cheh Peng	Member
	Dr Jeff Hwang	Secretariat
MOM school advisory committee	Mr Ravindran s/o Sockalingam	Secretariat

Committee	Staff	Role
Business Continuity Management Committee (BCMC)	Dr Peck Thian Guan	Member
	Mr Yam Guan Shyh	Member
	Ms Shen Wan Ting Sheena	Secretariat
Risk Management Steering Committee (RMSC)	Dr Peck Thian Guan	Member
	Dr Wong Su Ee	OSHE Risk Rep
Safety and Health Management Committee (SHMC)	Dr Peck Thian Guan	Deputy Chairman
	Dr Lim Cheh Peng	Secretariat
	Dr Wong Su Ee	Secretariat
Institutional Laboratory Safety Committee (ILSC)	Mr Saravanan Gunaratnam	Member
	Mr Francis Zheng	Secretariat
Institutional Biosafety Committee (IBC)	Mr Saravanan Gunaratnam	Member
	Dr Lim Cheh Peng	Member
	Dr Suzette De Leon	Secretariat
	Dr Christine Hu	Asst Secretariat
UCI's Innovation Excellence Steering Committee (iESC)	Dr Peck Thian Guan	Member
Innovation Excellence Transformation Unit (iETU)	Dr Peck Thian Guan	Advisor
	Mr Jedison Ong	Member
Process Review Committee (PRC)	Dr Peck Thian Guan	Advisor
	Mr Saravanan Gunaratnam	Chairman
	Dr Lim Cheh Peng	Member
	Dr Christine Hu	Secretariat
Duke-NUS ABSL-3 Biosafety Committee (ABC)	Dr Suzette De Leon	OSHE Rep
NUS Medicine BSL-3 Biosafety Committee (BBC)	Dr Suzette De Leon	Member
Institutional Animal Care & Use Committee (IACUC)	Dr Rajkumar Ramamoorthy	OSHE Rep
Institutional Safety & Health Professionals (ISHP)	Mr Saravanan Gunaratnam	Chairman
	Ms Zhou Qian	Secretariat
	Mr Lau Kwok Siong	Asst Secretariat
WoW Catalysts	Mr Jedison Ong	Member
	Dr Sheela Reuben	Member



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University Campus Infrastructure