

Ref: CINTRA/SOP/006.00	Date of issue: 21 Aug 2017	Next review date: 20 Aug 2020
Title : CINTRA Standard Operating Procedure on Safety Training		
Audience : CINTRA Community and Laboratory Users		

### 1. Aim

This SOP defines the requirement of provision of safety training to faculty, staff and students for work in CNRS International-NTU-Thales Research Alliance as part of building safety competency. This is in compliance with the Workplace Safety and Health Act and NTU Directive on Safety Communication and Training.

### 2. Scope

All faculty, staff and students (working within laboratory and workplace in CNRS International-NTU-Thales Research Alliance) shall adhere to the training requirement specified in this SOP.

### 3. Definitions

- 3.1 **Assumed Competency**, for the purpose of this document, refers to the attainment of the competency by virtue of being previously trained or by experience.
- 3.2 **Competency**, for the purpose of this document, refers to the state of being qualified in having the required safety knowledge, skill and aptitude to perform the task safely.
- 3.3 **Grading** is the assignment of a training module required for the job assigned.
- 3.4 **Risk Assessment** is the process of recognition, evaluation and control of hazards associated with a work by reviewing both the severity and likelihood of each hazard causing harm.

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- 3.5 **Safety Training Management System (STMS)** is an online platform to facilitate registration and record attendance on completion of internal safety training courses for NTU faculty, staff and students.
- 3.6 **Training**, for the purpose of this document, refers to any process (method) to either:
- (a) provide awareness and knowledge; or
  - (b) make competent by instruction and practice for the assigned work or response.
  - (c) The person is thus aware of the safety obligations, or able to use the necessary control measures to ensure his/her safety at work.
- 3.7 **Training Matrix** refers to a template defining the safety training a person should have in order to acquire the competency so as to accomplish his/her task safely.
- 3.8 **Training Methods** refers to the different media that can be used to deliver the safety instructions.
- 3.9 **CINTRA** – refers to the CNRS International-NTU-Thales Research Alliance
- 3.10 **SC** – refers to CINTRA Safety Committee

#### 4. **Roles and Responsibilities**

- 4.1 **Director CINTRA** shall ensure that:
- (a) the training matrix (see paragraph 5) is established for personnel in their area;
  - (b) the personnel has the relevant competency to do the assigned work safely; and
  - (c) adequate resources (including allocation of time) are provided for personnel to attend safety trainings.
- 4.2 **Principal Investigator (PI)/Reporting Officer (RO)** shall ensure that:
- (a) they identify training needs for the personnel working for them;

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- (b) the personnel working for them attend and complete the trainings as identified within stipulated time frame as identified in the School's safety training matrix.;
- (c) support CINTRA's safety training programme;
- (d) review on reporting staff's training needs when there is a change in their job nature and ensure the staff undertake new relevant safety training;
- (e) set additional safety training requirements for their staff where necessary; and
- (f) training records are kept for personnel working for them.

**4.3 Safety Training Administrator** shall ensure that the school:

- (a) training matrix are updated and reviewed;
- (b) training matrix are being communicated; and
- (c) progress of trainings are being monitored
- (d) liaise with OHS to upload safety courses for registration; and
- (e) track/update safety training records for faculty, staff and students.

**4.4 CINTRA Safety Committee** shall:

- (a) Establish the safety training requirements for CINTRA with alignment to NTU requirements.
- (b) Approve the training matrix for the school;
- (c) Appoint a Safety Training Administrator to manage the training records documentation for the school;
- (d) Organize and promote safety training for CINTRA community; and
- (e) Trigger for refresher training.

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- 4.6 **Faculty, Staff and Students** are to:
- co-operate with the SC to attend the required safety trainings within stipulated time frame, include any refresher training.
  - make reference to the established School safety training matrix and ensure due completion of relevant safety courses.
  - submit required certificate (or documentary proof) upon completion of training to CINTRA safety committee, PI, RO or laboratory in-charge for verification where requested.

## 5. CINTRA Safety Training Matrix

- 5.1 The CINTRA Safety Committee has developed a safety training matrix for faculty, staff and students as guidance for requirement of safety training (see example in Figure 1).

	NTU Safety Induction For Office Staff - OHS2SI001	NTU Safety Induction For Laboratory Users - OHS2SIL01	NTU Safety Induction for Faculty and Principal Investigator - OHS2SIF01	Safety Representative Training - OHS2SRT01	Safety Committee Members Training - OHS2SCM01	Fire Safety in NTU - OHS2FIS01	Electrical Safety - OHS2ELS01	Slip, Trip & Fall - OHS2STF01	Manual Lifting-OHS2MAH01	Use of Fire Extinguisher - OHS2FEB01	Work station/ Office Ergonomics - OHS2WDE01	Understanding Signage from SSS08 - OHS2SIG01	Basic Biosafety Training Course : Module 1 - OHS2BBL01
<b>Office Staff</b>	C					C	C	C	C	C			
<b>Lab Users</b>		C				C	C	C	C	C	C	C	
<b>Faculty / Principal Investigator</b>	D		C										
<b>Safety Representatives</b>				C									
<b>Safety Committee Members</b>					C								

Figure 1: Sample Safety Training Matrix

- 5.2 The safety information required for their faculty, staff and students to do their work safely will depend on the Risk Assessment<sup>1</sup> of the work.

<sup>1</sup> Mandatory under the Workplace Safety and Health (Risk Management) Regulations 2006. Please refer to NTU SOP on Risk Management.

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5.3 The CINTRA Safety Training Matrix can be found at the link provided below:

<http://cintra.ntu.edu.sg/Pages/default.aspx>

5.4 Exclusion: Undergraduates are only required to take specified safety courses stated by their respective School, for projects as part of their academic curricula.

## 6. Grading and Timeline for Completion

A grading level is assigned to each course against each workplace role or position in the safety training matrix. The grading and timeline for new staff/students to complete various courses are shown in Table 1:

Grading	Denote	Specifications	Timeline for completion (weeks)
C	Compulsory	Core trainings which are directly linked to the job function and hence such safety competency is required. (i) Core Courses (ii) All Safety Induction Courses (e-learning)	4  2
M	Mandatory	Required by law and personnel are to complete training from accredited training centres. No waiver can be given unless with specific approval from the regulators or the ministries.	Before assigned for such work.
D	Desired	Recommended trainings as these may be linked to the job function. School/ Department can replace training courses denoted with (D) in the training matrix to (C) should these training courses be deemed as compulsory for their faculty, staff and students.	N.A.

Table 1: Grading and Timeline for Completion of Safety Courses

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## 7. Criteria for Completion of Training

The criteria for completion of safety training shall be any one of the following:

- (a) attend the required safety training module (e-learning) and take a simple quiz with a score of at least 80%;or
- (b) assumption of previous acquired competency (see paragraph 8).

## 8. Assumption of Competency

All HODs and faculty members are deemed to have the assumed competency for all the safety courses except for safety induction courses as shown in training matrix (except for mandatory training courses or as prescribed under the CINTRA Safety Training Matrix). However, they are encouraged to attend or review the safety material to refresh their safety knowledge and university safety procedures.

## 9. Training Workflow

A risk assessment is to be conducted for the work to be undertaken. From this, the competency required of the person at work to complete the task safely can be determined (Figure 2). Training will be required if the competency of the person at work does not match that required.

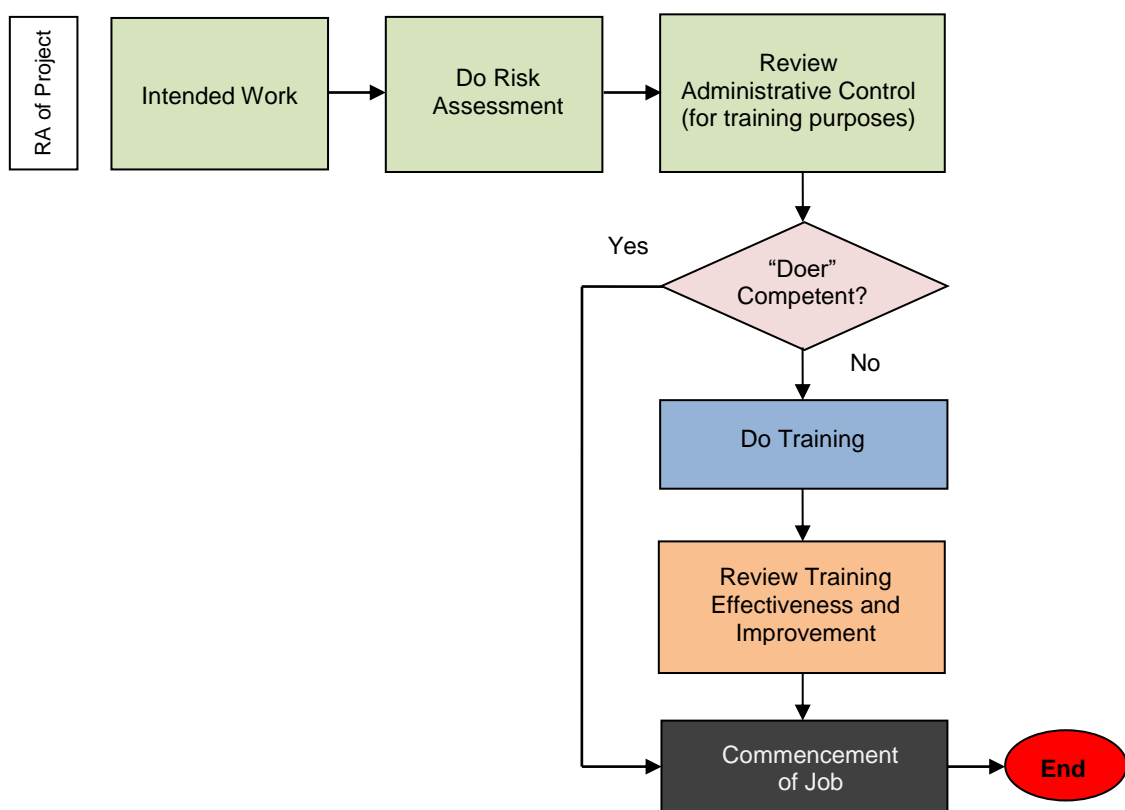


Figure 2: Training workflow

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**11. Change in Job scope**

Training needs must be re-evaluated for personnel who have a change in job scope, i.e. transfer from one department to another; or from administrative to laboratory, or vice versa. This shall be conducted by the new PI/RO that the personnel will be posted to.

**12. Training Cycle**

Retraining and review of safety requirement shall be done once every three years following mandatory review of risk assessment, or as required by legislative requirements. Retraining is required where there is a substantial change in content of the course or procedures.

CINTRA Safety Committee reserves the rights to send faculty, staff and students for retraining on a shorter interval, if needed.

**13. Training Methods**

There are several ways of training depending on the complexity and depth. Training can be:

- (a) E-learning; or
- (b) Instructional or Class room delivery.

**14. NTU Safety Courses**

OHS has developed a series of safety courses to provide adequate safety information and training for the staff and students to perform their work safely. These are in the form of classroom courses or e-learning modules as below:

- The classroom courses schedules are posted on STMS (see paragraph 15).
- The e-learning courses are uploaded on the NTULearn.

All users are required to attend the required safety training module and attempt a simple quiz with a score of at least 80% to be deemed as competent.

OHS shall regularly review the safety training materials to ensure the information meet the training needs and align to the NTU and legal requirements.

The detail of the NTU safety training information is available on OHS website at

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**15. Safety Training Management System (STMS)**

NTU staff and students shall register for the face-to-face courses via the respective online portal, i.e. Stafflink, GSlink or Studentlink. Course completion on NTULearn will be capture on STMS as well.

CINTRA may also administer their respective safety training courses using the STMS. The appointed Safety Training Administrator will liaise with OHS to upload the courses for registration.

The appointed Safety Training Administrator shall manage the safety training record for the Centre.

**16. Training Records**

The training records of all staff and students shall be retained for a period of 6 years after leaving NTU. Returning staff will have to retake the safety training.

All documents shall be readily retrievable during audits or inspections.

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## Version History

This Table below reflects the summary of changes made to the document. The full change information is indicated with yellow highlight in the document content.

Revision	Section	Details of Change	Document Author	Effective Date	Approved By
00	-	Initial Release	Jing Fei	21 Aug 2017	Dr Dinh Xuan Quyen

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