



Centre for Industrial Studies, Safety and Environment  
(CEISA)

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**Report on Short Course on Fundamentals of Occupational Health and Safety  
given to Directorate of Maintenance an Infrastructure-UEM 2024**

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ORGANIZING INSTITUTION:

Centre of Industrial Studies, Safety and Environment

PARTNER INSTITUTIONS:

Developing World Outreach Initiative (DOI)

TRAINING FACILITATORS:

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## 1. Introduction

From April 22 to 26, 2024, the Center for Industrial, Safety and Environmental Studies (CEISA) ran a short course on the Fundamentals of Health and Safety at Work for around 33 participants (30 Men and 3 women).

The main aim of the course was to equip participants with occupational health and safety techniques so that they acquire the knowledge and skills to identify hazards in the workplace and define methods of controlling and eliminating occupational risks, using an interactive approach and case studies on the following topics:

- Introduction:
- Introduction to Emergency Plans:
- Legal aspects: standards and regulatory guidelines:
- Recognition: Overview of physical and chemical risks
- Recognition: Overview of ergonomic, biological and mechanical risks:
- Workplace inspection overview:
- Step-by-step survey - Identifying occupational hazards and risks:
- Electrical safety:
- Machinery risks and protection:
- Working at Height:
- Laboratory safety:
- Fires and explosions
- Case Study: Construction and Work at Height
- Health Risks - Assessment, Prevention and Control
- Chemical Risks and Exposure Monitoring
- Physical Risks - Radiation
- Heat stress
- Physical Risks - Noise
- Health Risks - Assessment, Prevention and Control
- Ergonomic
- Psychosocial

- Controls - Engineering
- Personal Protective Equipment
- Administrative Control
- Respiratory Protection
- Implementation of the Occupational Health and Safety Management Program
- Overview - Policies, Importance and Responsibilities, Planning and Performance
- Measurement of Occupational Health and Safety Stressors
- Risk Assessment and Corrective Actions
- Training Techniques and Strategies -
- Incident reporting and investigation

The training took place over 5 working days, with a training duration of 15 hours. The entire syllabus was completed in full.

## **2. Target audience**

The training was face-to-face, taught in Portuguese and offered full-time over five (5) consecutive days. It covered the fundamental program for establishing an Occupational Health and Safety (OHS) system.

The workshop helped participants to know how to identify and assess occupational risks, focusing on a university environment, using specific examples from UEM. It provided a framework for a sustainable OHS management system, emphasizing policy, planning, organization (including roles, responsibilities and accountability), risk assessment and management, awareness and training, auditing and inspection, and management review.

The workshop was delivered using a variety of teaching techniques, including lectures, small group discussions and exercises to apply knowledge and skills. The exercises included opportunities outside the classroom to identify and assess risks. Participants had opportunities to share their experiences and survey their area of work to identify various hazards, analyze the risk and recommend control measures.

### 3. Training period and location

The training in Fundamentals of Occupational Health and Safety (OHS) took place from April 22 to 26, 2024, in the social fund room on the UEM main Campus.

### 4. Training indicators

The following images show the course of the training, with the facilitators presenting the topics proposed in the training program.



*Figure 1: Celso Tivane presenting the topic on Introduction to Occupational Health and Safety*

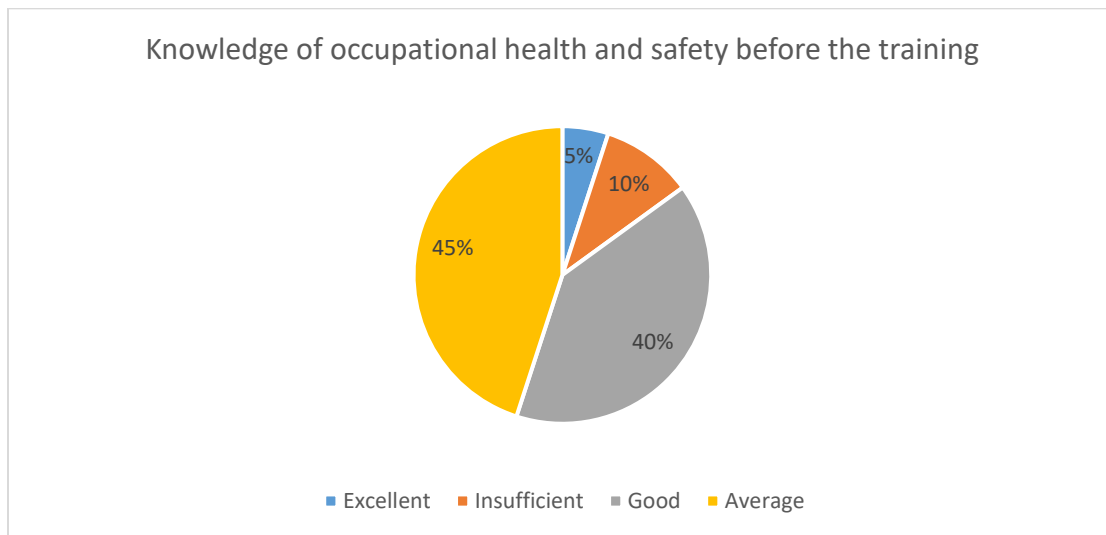


*Figure 2: Dalmildo Goncalves presenting the topic on Emergency Responses*

## 5. Qualitative evaluation of the training

In order to qualitatively evaluate the training in Fundamentals of Occupational Health and Safety, a questionnaire was created and sent to the trainees via Google Form. The data obtained was analyzed and processed for content.

### 5.1. Initial knowledge of trainees



*Figure 3: Initial knowledge before taking the course*

With regard to the trainee's initial knowledge, it was found that when they attended the course, 5% of them already had excellent knowledge, while 10% said they knew little about the subject.

Others with average and good, basic knowledge of Occupational Health and Safety made up around 40% and 45% respectively.

### 5.2. Expectations

The result of the trainee's expectations of training in Occupational Health and Safety Fundamentals is shown in figure 7.

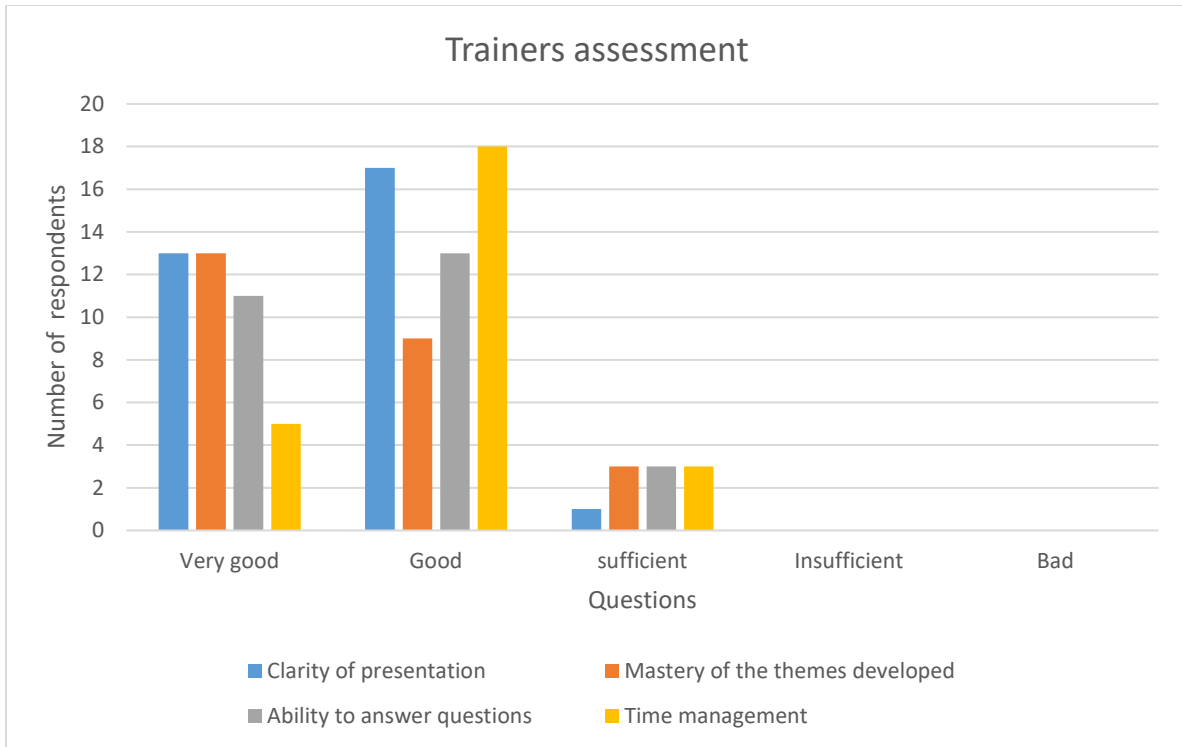


*Figure 4: Training expectations*

By attending the training, the trainees confirmed their expectations, with 60% of them confirming that their expectations were met.

### 5.3. Rating the trainers

The trainees were asked to rate the facilitators of the Fundamentals of Occupational Health and Safety course. Figure 8 below illustrates the results of the rating of the trainers.

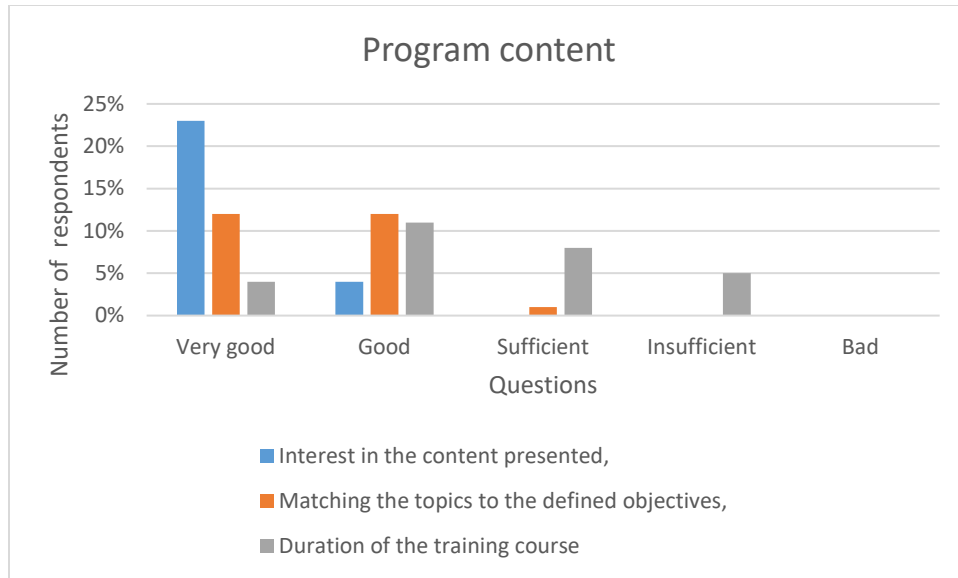


*Figure 5: Classification of trainers*

The trainers were rated on their mastery of the subject matter covered and on how clearly they conveyed the course topics. With regard to mastery of the subject matter covered, the majority of trainees rated the trainers as average or good. With regard to the clarity of the topics covered, the majority of trainees rated them good and excellent.

#### 5.4. Training delivery

Trainees were asked about the way in which the course was delivered. Figure 9 below shows the trainees' response to the way the course was run.

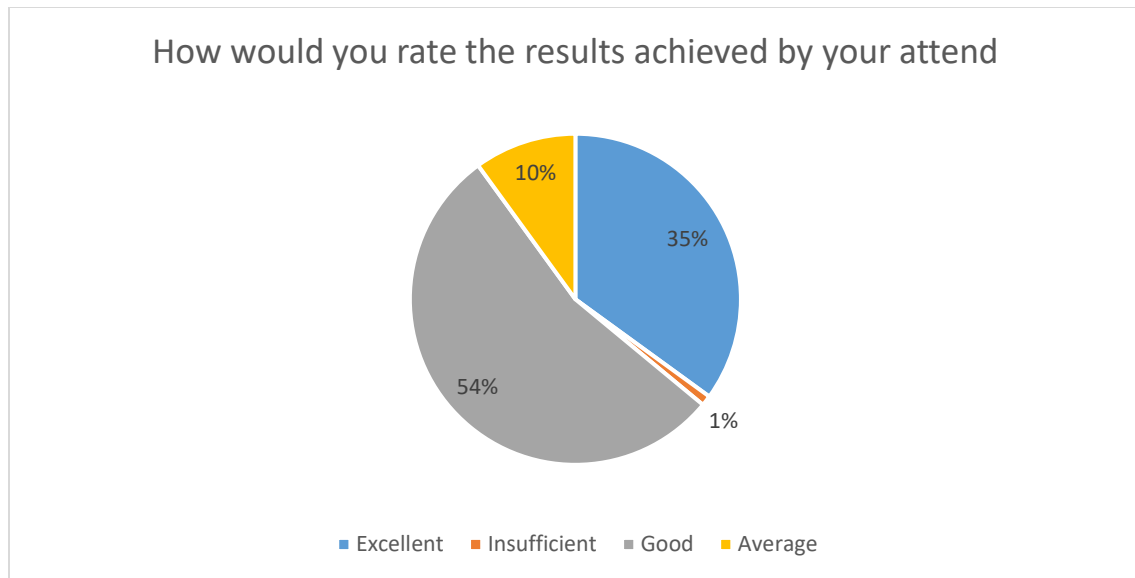


*Figure 6: Delivering the training*

With regard to the delivery of the training, it was rated as having a very short course duration in relation to the content taught. The course objectives were rated as excellent, good and average in terms of their clarity. During the training, the trainees received good support from the trainers. The majority of trainees said that they would be able to apply the knowledge acquired in the training in an excellent way.

## 6. Results achieved

The trainees were asked how they rated the results achieved by attending the Fundamentals of Occupational Health and Safety course. Figure 10 below shows the trainees' response to the question.



*Figure 7: Classification of the results achieved*

Figure 7 shows that the results achieved by attending OHS training were good for 54% of the trainees, excellent for 35% of the trainees and average for 10% of the trainees.

## 6.1. Strengths of the training

- In order to identify, through the perception of the trainees, the positive aspects in relation to the way the training took place and what caught the attention of the trainees, the trainees were asked about their strengths. The trainees mentioned the following strengths:
  - Punctuality and the trainers' experience in OHS;
  - The topic related to responses to emergency situations;
  - The contents of the course are appropriate to the current situation;
  - The way the topics were explained was very good.
  - The practical exercises solidified knowledge of the texts and explanations;
  - The way the trainers dealt with the trainees, their ability to make the class cheerful and the fact that the topics covered were extremely important;
  - Topics related to types of occupational risk agents and an introduction to health and safety inspections at work, safety signs and working in confined spaces;

- Debates on the difference between risk and hazards;
- The topics were well distributed and focused on real life situations faced by DIM employees;
- The trainers were very rigorous.

## **6.2. Weaknesses of the training**

As a way of improving the teaching of Occupational Health and Safety Fundamentals and preparing for future training, the trainees were asked about their weaknesses. The trainees mentioned the following as weaknesses of the training:

- Learning only during classes does not guarantee effective assimilation, we need more support;
- Too much material and not enough class time;
- More practical classes were lacking, there should be theoretical moments and moments with more practical exercises for better understanding;

## **6.3. Trainees' suggestions about the training**

The trainees were asked to give their suggestions on how the training was delivered. The trainees suggested:

Organization and availability of the training material;

- Extending the duration of the course to at least two weeks;
- More practical implementation to see how inspections in establishments should be carried out;
- Training time should be at least 3 weeks;

#### **6.4. Other training courses that trainees would like to attend**

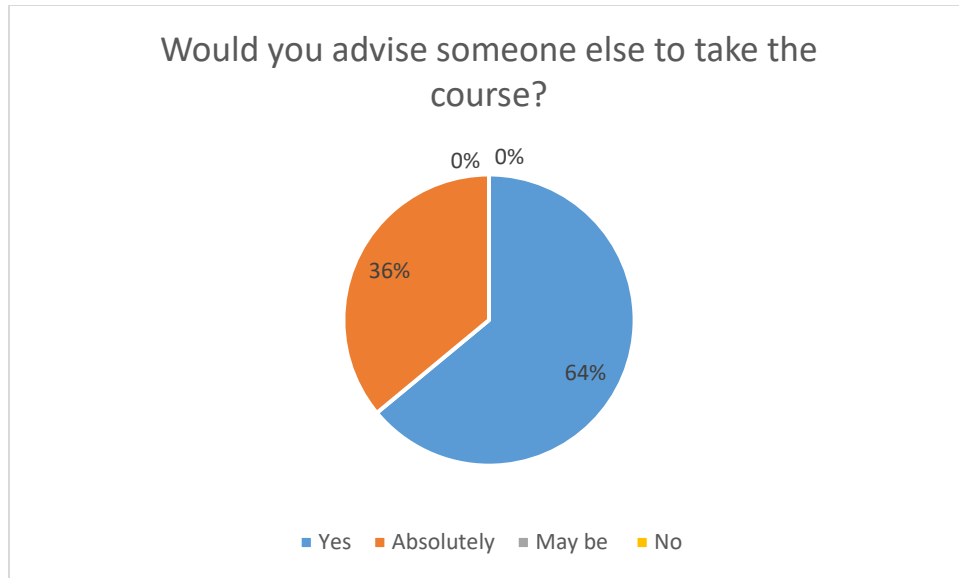
The participants in the training on the Fundamentals of Health and Safety at Work were asked if they would like to take part in future training provided by CEISA-UEM and what that training would be.

The trainees replied:

- OHS in the more practical component;
- Include other areas of OHS not only engineering;
- Specialization in occupational health and safety inspection and safety signs;
- First aid training;
- Continuation of the same OHS training;
- OHS training in the construction industry;
- OHS training in plumbing;
- Emergency situations in confined spaces;
- Direct practice in the workplace;
- Specialization in accident investigation.

#### **6.5. Advice of the trainees about the course**

The trainees were asked if they would advise someone else to attend the training in Fundamentals of Occupational Health and Safety. Figure 8 below shows the trainee's response to the questions



*Figure 8: Recommendations of the trainees about the course*

Figure 8 shows that the trainees would advise other people to attend training in Occupational Health and Safety Fundamentals.

All the trainees answered yes and certainly, because:

- It is pertinent regardless of the area of work you are in;
- It is necessary in any institution;
- It contains content that society needs to know about beyond just professional matters;
- Many labor sectors do not observe or have ignored the issue of OHS;
- It's a very interesting area which gives you greater knowledge of safety at work and allows you to prevent dangers and risks in your workplace;
- It is very useful for professions at risk;
- This course explains some of the scenarios that could jeopardize our health in the workplace;
- Mastering OHS helps us to reduce the risks in our working environment;
- It has good content and excellent trainers;
- It serves well to broaden our knowledge of OHS;
- The training they give is extremely important, not just for application in the workplace, but for everyday life too;

- It is essential for a person to have knowledge of the basics of health and safety at work in order to prevent, minimize or resolve a problem, i.e. an incident that may occur;
- It's fundamental for public health;

## 6.6. Comments and suggestions from trainees

The question proposed was designed to give trainees a chance to express themselves in relation to the training in Fundamentals of Occupational Health and Safety.

In general, the trainees made comments and/or suggestions:

- To thank the Institution for the opportunity it has given to be able to take part in this training which increases our qualifications as technicians;
- CEISA-UEM should continue with this type of training (design courses for the informal sector (street sellers), schools bus drivers school , etc.). There is a need to educate society in general in the context of OHS;
- Future courses could also be taught online to allow for greater adherence;
- I am pleased to have taken the Fundamentals of Occupational Health and Safety course;
- Increase the workload;
- Good and productive course;
- Internship after training;

## 7. Certificates

Certificates were produced for the trainees who received the training in Fundamentals of Occupational Health and Safety. The training lasted 15 hours.

## 8. Constraints

The process of preparing and delivering the training took place with the following constraints:

- An increase in the number of candidates for the course without informing the facilitators;
- Lack of laptops /pen drives for projecting slides

## 9. Acknowledgements

The Center of Industrial Studies, Safety and Environment wish to thank the financial support provided by Developing World Outreach Initiative (DOI) for sponsoring this project

10. Annexes

During the training sessions





Awarding certificates to trainees



Trainees showing their certificates



