



UNIVERSIDADE FEDERAL DO CEARÁ

FEDERAL UNIVERSITY OF CEARÁ
OFFICE OF THE VICE PROVOST FOR UNDERGRADUATION (PROGRAD)
COORDINATION FOR PROJECT AND CURRICULUM DEVELOPMENT
CURRICULUM DEVELOPMENT DIVISION

1. Academic unit offering the curricular component (Faculty, Center, Institute, Campus):

Center of Technology

2. Department offering the curricular component (when applicable):

Hydraulics and Environmental Engineering Department

3. Undergraduate course(s) offering the curricular component

Code of the Course	Name of the Course	Course Degree ¹	Curriculum (Year/Semester)	Nature of the Component ²	Semester of Offer ³	Habilitation ⁴
91	Telecommunications Engineering	Bachelor	2015.1	Mandatory	08	-

4. Name of the curricular component:

Industrial Hygiene and Workplace Safety

5. Code of the curricular component (filled by PROGRAD):

TD0922

6. Prerequisites	No ()	Yes (x)	
		Code	Name of the curricular component / activity
		TI0136	Integrated Actions in Science and Technology II

7. Co-requisite	No (x)	Yes ()	
		Code	Name of the curricular component / activity

8. Equivalences	No ()	Yes (x)	
		Code	Name of the curricular component / activity
		TD0904	Industrial Hygiene and Workplace Safety

9. Day period of the curricular component (more than one option can be selected):

(x) Morning (x) Afternoon (x) Night

¹ Fill with *Bachelor (Engineer), Licenciante, or Technologist.*

² Fill with *Mandatory, Optional, or Elective.*

³ Fill when mandatory.

⁴ When elective, fill with the habilitation or emphasis to which the curricular component is linked.

10. Regime of the curricular component: Semester Yearly Modular**11. Justificatory for the creation/regulamentation of this curricular component**

Provide the student with basic knowledge about industrial hygiene and safety at work, which will be useful in their professional practice.

12. Objectives for the curricular component:

Provide the student with basic knowledge of the physical, chemical and biological agents that make up industrial hygiene, present the most important aspects of occupational safety and current labor standards.

13. Syllabus:

Concepts. Problems arising from exposure to temperature, radiation, noise, etc. Basal metabolism. Atmospheric pollution. Measurement apparatus. Notions of occupational diseases. Labor legislation. Industrial security. Security interest. Order and cleanliness. Fires.

14. Program:

1. Introduction to industrial hygiene and safety at work.
2. Occupational environmental and operational risks. definition of work accident. frequency and severity index.
3. Labor legislation: NR-4 and NR-5.
4. Text on legislation.
5. Group 1 - NR-6 (personal protective equipment) and Group 2 - NR-17 (ergonomics), plus lighting and ventilation issues.
6. Excessive temperatures. Heat and cold. Thermal exchange, thermal exchange mechanisms, homeotherm equilibrium, heat effects on the body, measurement instruments, heat assessment and control measures.
7. Group 3 - ionizing and non-ionizing radiations: electromagnetic radiation, types of radiation, radiation units, detection and tolerance limits, effect of radiation on humans, control measures, and nuclear accidents.
8. Excessive noises. Pressure level setting. Sound propagation. Measurement instruments. Noise assessment and control measures.
9. Chemical and biological agents.
10. Group 4 – N-16, N-19 and N-20 (hazardous activities, operations and explosives, combustible and flammable liquids). Group 5 - NR-33 (safety and health at work in confined spaces).
11. Labor legislation: nr-7 and nr-9 and group 6 - first aid notions.
12. Fire protection.

15. Workload description

Number of Weeks:	Number of Credits:	Total Workload in Hours:	Theory Workload in Hours:	Practice Workload in Hours:
16	02	32	32	-

16. Basic bibliography:

- 1- Apostila da disciplina e aulas ministradas, os quais podem ser obtidos no endereço: www.posdeha.ufc.br. Clicar em Sistemas de Disciplinas e colocar como usuário e senha: histandre.

17. Complementary bibliography:

- 1- Introdução à Engenharia de Segurança do Trabalho. Fundacentro. 1981.547 pp.
- 2- Manual Prático de Avaliação e Controle de Calor. Tuffi Messias Saliba. 2000.
- 3- Manual Prático de Avaliação e Controle de Gases e Vapores. Tuffi Messias Saliba. 2000.
- 4- Manual Prático de Avaliação e Controle de Ruído. Tuffi Messias Saliba. 2000.
- 5- Segurança e Medicina do Trabalho – Normas Regulamentadoras Ed. Atlas. 59ª Edição. 2006.