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GERMAN OCCUPATIONAL HYGIENE SOCIETY DGAH e.V.

1 The Goal of the German Society of occupational hygiene DGAH

The goal of the German Society of occupational hygiene DGAH is to promote the knowledge and recognition of Occupational Hygiene in all work related fields and to improve and maintain a safe and healthy working environment for all. The DGAH intention is to assist Occupational hygienists in their personal education through a variety of conferences and educational offers as well as promote a platform to communicate between professional occupational hygienists and to give advice to companies as well as authorities by the publication of summaries explaining current scientific knowledge. Cooperation between all occupational health & safety specialists shall be promoted as well.

2 CODE OF ETHICS FOR OCCUPATIONAL HYGIENISTS

A. Professional responsibility

Principles of this responsibility

Occupational hygienists are responsible for exercising their discipline in an honest and competent manner in accordance with the recognised principles of Occupational Hygiene of DGAH, which acknowledge that the life, health and well-being of individuals depend on their professional judgement. They avoid circumstances which might compromise their



professional judgement or give rise to conflicts of interest, so that they can guarantee the integrity of their profession. They conduct their work in accordance with agreed standards of transparency and quality assurance.

B. Responsibility for themselves and others

The object of this responsibility is that Occupational hygienists must maintain a high degree of integrity and competence, use appropriate scientific methods and interpret their results with good faith in a neutral manner. They must share scientific knowledge for the well-being of workers, society and the profession, protect confidential information and only deal with subjects within their own sphere of competence. They apply a systematic approach based on a sound analysis of hazard, risk and risk management methods.

C. Responsibility towards employees

Protection of health and well-being of the workforce:- Occupational hygienists must acknowledge that their first duty is to protect the health and well-being of employees & contractors in the workplace. They take an objective approach to the assessment, identification, evaluation and control of risks to health, without subjecting themselves to external influences, in recognising that the health and well-being of employees and other persons depend on their competence and professional judgement. They aim to provide the same standard of care, in an even-handed manner, to all the people for whom they are responsible.

D. Responsibility for towards employers and clients

The basis of relations with employers and clients:- Occupational hygienists must provide advice to employers and clients in an honest, responsible and competent manner. They must respect confidentiality and properly discharge their responsibilities to employers and clients. However, these responsibilities are subordinate to their ultimate responsibility, which is to protect the lives and well-being of the workforce. They advise employers and clients on current standards, directives and all other legal requirements in the area of occupational hygiene. They report their results and make their recommendations in a true and honest manner and make sure that their professional judgment is applied only within their own sphere of competence and expertise. They manage and administer their professional services to ensure a high standard of sound and reliable reporting, which records and explains the results obtained and the conclusions drawn from them.



E. Responsibilities towards the public and the environment

The impact of decisions on public health and ecology:- Occupational hygienists must take into account the eventual impact of the decisions and actions they take on the public and the environment. They give honest, effective and pragmatic advice to all parties concerned with risks to health and the means of protection. They apply the principles of occupational hygiene in a responsible manner to contribute to the creation and maintenance of a good environment for everyone.

F. Responsibilities towards the community

The management of conflicts of interest:- Occupational hygienists must operate on the principle that in dealing with risks that impinge on both the working and the wider community, employers, clients, employees and the public will have common interests. However, if conflicts of interest do appear, they must be resolved in a manner which does least damage to workers, the environment and the community.

G.

The DGAH Code of Ethic is taught within all available courses of the DGAH and the management board had already established mechanism and disciplinary steps, to ensure that these principles were recognized by all members.

Informative Note:

Unless the Board gets hints about "Transgressions", it will be verified as follows. The Board is trying to determine whether there are objective facts. Each person involved will be asked for a statement regarding the critical occurrence and asked to give an opinion. The Board decides on the further course of action.

3 Candidate Education and Experience

As set in the minimum requirements each applicant for a DGAH occupational hygienist need to comply with the IOHA accreditation criteria, "candidate education and experience- bachelor's degree plus suitable experience =7 years".

1. as a sound background in basic science:
 - Minimum Bachelors Degree in a scientific field e.g. medicine, chemistry, biology, physics, engineering, psychology, environmental or natural sciences etc.



2. post graduate degree or an appropriate list of post graduate course work addressing:
 - broad areas of toxicology
 - fundamentals of occupational/industrial hygiene
 - fundamentals of exposure assessment and measurement
 - fundamentals of exposure mitigation and control
3. perennial experience in relevant fields of occupational hygiene
 - Minimum of 4 years of suitable experience for bachelors
 - Minimum of 3 years of suitable experience for masters
 - Doctorate degree need 2 additional 2 years of relevant experience.

Definition of relevant fields of occupational hygiene:

A. Basic Sciences

1. General scientific concepts, anatomy and physiology, biochemistry, biology, chemistry, mathematics and physics; properties of flammable, combustible and reactive materials (compatibility); calculations such as those relative to gas laws, airborne concentrations, unit of measure conversions and conditions of non-standard pressure
2. Knowledge of human-environment relationships in and outside the work place; knowledge of the scientific method.

B. Toxicology, epidemiology, and hazard assessment

1. Basic biostatistics: statistical and non-statistical interpretation of data.
2. Epidemiology: techniques used to study the distribution of occupationally induced diseases and physiological conditions in workplaces and factors that influence their frequency; concepts of prospective and retrospective studies, morbidity and mortality and animal experimental studies, data and distribution of data.
3. Toxicology: dose response, mode of action, additive, synergistic and antagonistic effects, routes of entry, absorption, metabolism, excretion, target organs, toxicity testing protocols and aerosol deposition and clearance in the respiratory tract.



C. Health Hazards

1. Biological Hazards: principles of sanitation, personal hygiene, deleterious effects of biological agents or materials, viruses, bacteria, fungi, molds, allergens, toxins, recombinant products, blood borne pathogens, etc.
2. Chemical Hazards: carcinogenic, mutagenic, teratogenic, systemic and reproductive effects resulting from inhalation, skin, and gastrointestinal exposure to chemical substances.
3. Physical Hazards: physical characteristics of and stress arising from exposure to noise, vibration, heat, cold, ionizing radiation, non-ionizing radiation and poor lighting.

D. Exposure and Risk Assessment

1. Analytical chemistry, instrumentation, sampling methods/techniques, calibration, quality assurance, sampling strategy
2. Qualitative and quantitative exposure assessment.
3. Statistical evaluation of exposure data
4. Occupational exposure limits, threshold limit values.

E. Hazard Mitigation and Control

1. Administrative: Systems of work or safe practices that prevent or reduce risks to health, property and the environment.
2. Engineering: Local exhaust ventilation and dilution, airflow measurements, design principles. Isolation, substitution, containment and process change. Application of ergonomic principles. Control of physical and biological hazards.
3. Personal Protective Equipment: selection, use and limitations of respirators and protective clothing; respirator fit testing, breathing air specifications, glove permeability and eye protection.

F. Management System Principles

1. Acquisition, allocation, and control of resources; data management and integration, emergency planning and response.
2. Guidelines and standards: interpretation and use of guidelines and standards for the assessment of health hazards.
3. Hazard communication and training of employees.

G. Community and environmental health

1. Hazardous waste, air and water pollution, air cleaning wastewater treatment technology, emission source sampling, atmospheric dispersion of pollutants, ambient air and water monitoring, health and environmental effects of air/water pollutants.



H. Health, Safety & Environmental Legislation

1. Knowledge of the legal framework of occupational/industrial hygiene.
2. Understanding the legal responsibilities of employers and employees.

These criteria have to be fulfilled to become a occupational hygienist or a DGAH certified occupational hygienist.

4 Professional competence of candidate

...determined in a sufficiently rigorous fashion:- e.g. what are the qualifications of the examiners and do they evaluate to world-class standards.

Examination-procedure

- fulfilment of the conditions of the “competency document” (see IOHA-criteria 3), proven by the DGAH-board of examiners
- successfully evaluation of three submitted occupational hygienic assessments/occupational hygienic expert’s reports dealing with at least two different occupational aspects by the DGAH-board of examiners
- Oral examination by a DGAH-board of examiners consisting at least of two qualified examiners

Examiners’ qualifications

- qualified occupational hygienist (DGAH) with good standing concerning maintenance of professional status
- more than 5 years’ experience as an occupational hygienist (DGAH)
- more than 10 lectures concerning occupational hygiene
- recognition by the board of DGAH

Attribution of title

After having successfully completed the final examination the candidate receives the certificate by the DGAH-board of examiners. The recognition of the title is delivered in writing.

The title Occupational Hygienist - DGAH is linked to the position of member of

DGAH.



Route of appeal

The board of DGAH is the authority for appeals against negative decisions delivered by the DGAH-board of examiners. Appeals against negative decisions can be sent to the President of DGAH within 30 days from the date of notification.

5 Evaluation

The German DGAH recognised the status as Occupational hygienist for occupational hygienist who made a professional training equivalent to the DGAH professional training listed below (as a non-exhaustive list):

- Swiss SSHT certified hygienist
 - Registered Occupational Hygienist Nederland
 - Diplomate Hygienist of the Faculty of the British Occupational Hygiene Society
 - Certified Industrial Hygienist (CIH) of the American Board of Industrial Hygienist
- If the applicants they have joined an additional course in national specific regulations.

Base or fundamental course

The basic professional training shall demonstrate a deep picture of the wide spectrum of occupational hygiene and should motivate to find interdisciplinary solutions for occupational requirements or recommendations.

Themes of the base courses beside others are:

- Methods
- Risk, Hazard
- Human, recommendations with regard to growing number of older workers
- Environment
- Management measures, Management System principles
- Fundamentals in occupational hygiene
- Juridical recommendations
- Media and their use
- Personal protective equipment

- Base disciplines



Professional training

The professional course is build up of modules covering all relevant fields of occupational hygiene aspects and some practical training.

Through a modular concept beginners with different background shall be motivated to improve their knowledge in known and unknown field of occupational hygiene (OCPH). Additional and previously unknown field of OCPH will be trained with a major focus on occupational practical aspects.

Some of these modules are listed below:

- Light
- Accustic
- vibration
- Noise
- Radioactive
- Biological risks
- Hazard chemicals
- Muscle based work
- Climate, Work environment
- Psychic impacts
- Work organisation
- Works place arrangement
- Accidents and injury
- Interactions
- Basis of different stress factors
- Measurements measures and monitoring techniques
- Analytic techniques
- Protections and effectiveness checks
- Practical courses

Examinations were carried out by a selected test board of Examiners. All selected Examiners have to be well trained professionals in their field, with a good reputation and member of the DGAH.



The board of examiners is build up of minimum 2 Experts, which are responsible to check written or oral examinations. An examination can be passed with minimum 65% of correct answers, given within the examination. Final examinations will require a written test and the option of an oral re-audit if only 50 %or more of the requirement were achieved in a written test.

All applicants are free to claim a formal objection. This will be proofed by the management board of the DEGAH which shall be not a member of the specific board of examiners.

The decision of the management board can be objected by the DGAH chair. The DGAH chair can be asked for a final evaluation.

6. Maintenance of professional status requires ongoing/continuing professional experience/development-formal mechanism

Duration of the certificate “Occupational Hygienist (DGAH)” as an evidence for being in good-standing concerning maintenance of professional status

- 5 years

Criteria for successfully re-evaluation as “Occupational Hygienist (DGAH)” after 5 years

- documented advanced vocational trainings of 60 recognised DGAH-training-stars within the last 5 years (mean of 12 stars per year) assessed by the DGAH-board of examiners
 - 6 stars per year are given for personal development (reading specialist literature, etc.).
 - 6 supplementary points must be obtained each year (mean) for professional development activities which are either organized or recognized by DGAH.
 - Some points are attributed by DGAH to development activities concerning occupational hygiene aspects according to the following table :
 - a training lasting 1 hour 1/4 stars
 - a training lasting 2 hours 1/2 stars
 - a half-day course 1 stars
 - a full-day course 2 stars



- the number of stars is doubled if the occupational hygienist delivers the presentation or the course in person. Presentations of short duration (10-15minutes) are given 1/2 stars.
- 4 stars are awarded for articles published in a specialist peer-reviewed occupational hygiene journal. Articles published in a journal without peer review are credited with 2 stars.
- Occupational hygienists who undertake professional development activities which are not on the DGAH list of recognised trainings can claim the number of stars that they consider appropriate. The DGAH-board of examiners reserves the right to adjust the number of stars attributed.

7. Interface with related Disciplines

The German Society for occupational Hygiene (DGAH) acts in cooperation with other related professional disciplines and Societies to ensure an enhanced broadness expanding technical knowledge and expertise.

The DGAH has a contracted cooperation with the German Society of Safety Engineers (VDSI, see: http://www.vdsi.de/1483?wc_lkm=1559) and cooperates on regional basis with other relevant Partners, like the Association of German operations and works doctors e.V., named VDBW which represents the Professional Association of German occupational physicians.

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