

Rules and Requirements applicable to the registration of Toxicologists in The Netherlands

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Introduction

Professionals in the area of toxicology can have their professional skills registered in a national registry of toxicologists, if they meet specific requirements on education and experience.

The Concilium Toxicologicum (CT) of the Netherlands Society of Toxicology (NVT) decides by Decree which requirements apply to the Registration and to the Renewal of Registration of Toxicologists as well as the attainment targets of the training program required for Registration. These Rules and Requirements of the NVT are formulated by the CT in consultation with the Registration Committee Toxicology (RT) of the NVT and are detailed below in the “Decrees” of the CT. The requirements for Registration by the NVT are sufficient for and recognized by EUROTOX for registration as a European Recognized Toxicologist (ERT).

Requirements have been formulated for the Admission of the Candidate Toxicologist, for the Appointment as Supervisor, for the Training Faculty, for Registration as a board-certified Toxicologist, and for Renewal of Registration. All requests for Admission, Appointment, and (Renewal of) Registration are judged by the Registration Committee Toxicology (RT) of the NVT.

Decree 1. Requirements for Registration as Supervisor

The Supervisor proposes the personal training plan together with the Candidate, chairs the Training Faculty (at least 2 members), and assists in the process of Registration. The NVT aims to have Supervisors at all Dutch institutions at which toxicology is taught.

Supervisors will be nominated by the Executive Board of the NVT. Requests to register a Supervisor must be submitted to and will be approved by the Registration Committee Toxicology (RT) of the NVT according to the criteria listed below. Supervisors are subsequently appointed by the Executive Board of the NVT.

All Supervisors must have a PhD degree and have been registered by the NVT as a Toxicologist for at least five years. The expertise of a Supervisor must cover at least two distinct subfields of toxicology. Examples of subfields are listed under Degree 4.

Supervisors based in toxicological research, affiliated to a university or a similar institution, must be employed in the field of toxicology for more than 70% of the time (at least 0.7 fte). They must have a chair at a Dutch university as professor. Moreover, they need to have more than 5 years of experience in supervising PhD students.

Supervisors in the field of applied toxicology need to have extensive (at least 10 years) experience in the field of applied toxicological research and/or consultancy. They must have broad experience in supervision of toxicological research in an applied environment. They are experienced in research

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management and/or in supervising toxicologists who (mainly) work in non-academic settings such as industry and consultancy.

Supervisors (being already Registered Toxicologists, ERT) are appointed for a period of five years by the executive board of the NVT. For Renewal of Registration as Supervisor, the same criteria apply as defined for Renewal of Registration as a Toxicologist, with the additional requirement that a Supervisor in the five years preceding Renewal must have mentored at least two Candidate Toxicologists. Deviations from this requirement have to be well motivated and approved by the executive board. The executive board of the NVT will be responsible for checking these criteria prior to renewal and to maintain a list of Supervisors including the term for which they have been appointed.

Requirements for Supervisors (Decree 2) and Training Faculty (Decree 3).

Requirement regarding	Supervisor from research field	Supervisor from applied field
1. Period of registration as ERT by NVT	≥5 years	≥5 years
2. Appointment	>70% in toxicological field	>70% in toxicological field
3. Tasks	leading role regarding toxicology	leading role regarding toxicology
4. Expertise/experience	Appointed professorship	≥10 years of experience in toxicology
5. Level/title	Full professor	PhD
7. Training Faculty*	Supervisor + at least 1 board certified toxicologists (>5 years of registration)	Supervisor + at least 1 board certified toxicologists (>5 years of registration)
8. Renewal of registration	every 5 year + preceding 5 year having mentored ≥2 candidate toxicologists	every 5 year + preceding 5 year having supervised ≥2 candidate toxicologists

* See **Decree 3**: the Supervisor may be the same person as the PhD Supervisor (promotor)

Decree 2. Admission criteria for the Candidate Toxicologist

Candidates have to find a Supervisor at the start of the professional training track. A request to be admitted as a Candidate Toxicologist must be submitted to and will be judged by the Registration Committee Toxicology (RT) of the NVT

The NVT keeps a record of Toxicologists, who are registered by NVT as Supervisor (see **Decree 1**). NVT and Koninklijke Nederlandse Chemische Vereniging (KNCV, the entity that handles the registration administration of the NVT) will do this within the limits of the General Data Protection Regulation (EU) 2016/679 ("GDPR"). The Supervisor proposes the personal training plan together with the Candidate, chairs the Training Faculty, and assists in the process of Registration.

The Candidate Toxicologist has successfully completed his/her education at a recognized academic university (scientific education)). A master's degree (MSc) in a medical, biological, veterinary, biochemical or pharmaceutical field provides the most suitable background for the training program. Deficiencies in basic knowledge in anatomy, histology, physiology, cell biology and chemistry (biochemistry, organic chemistry, analytical chemistry) will require supplementation advised by the Supervisor; this will then become part of the personal training plan.

Decree 3. Requirements for (Members of) the Training Faculty

Requirements for the Chair of the Training Faculty (the Supervisor) are described in **Decree 1**.

All other Members of the Training Faculty:

- must be a NVT-registered Toxicologist for at least five years;
- preferable work in a (sub)field of toxicology that is closely related to the field in which the Candidate receives practical training;
- must be able to judge the Candidate's performance and whether the Candidate meets the requirements for Registration;
- must have experience in leading working groups;
- are allowed to give (un)solicited advice regarding the training plan.

The chair shall not have a direct professional relationship with the candidate (e.g. manager). This does not apply to the promoter of a PhD student.

Decree 4. Requirements for Registration as Toxicologist

Requests for Registration must be submitted to and will be judged by the Registration Committee Toxicology (RT) of the NVT.

The Toxicologist must have the following knowledge and competences:

1. A general overview of the entire field of toxicology. In the Netherlands this is offered by the curriculum of the Postgraduate Education in Toxicology (PET) and consists of:

A. Compulsory/mandatory courses

1. General Toxicology
2. Molecular Toxicology
3. Cell Toxicology
4. Pathobiology
5. Organ Toxicology
6. Introduction Laboratory Animal Science
7. Epidemiology
8. Ecotoxicology
9. Risk Assessment

B. Optional courses

A selection of at least three of the following courses:

1. Medical and Forensic Toxicology
2. Occupational Toxicology
3. Food Toxicology
4. Immunotoxicology
5. Reproductive Toxicology
6. Mutagenesis and Carcinogenesis
7. Toxicogenomics
8. Risk Communication
9. Legal and Regulatory Toxicology
10. Neurotoxicology

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Information regarding the content, duration, schedule, and other details of the courses offered by the Postgraduate Education in Toxicology can be found on the website of the PET (<http://www.toxcourses.nl/>). Having successfully completed a course that is accredited by EUROTOX may be used to demonstrate the toxicological knowledge.

2. The Toxicologist must also have a proven research experience with a toxicological focus with a minimum duration of four years, and a minimum of four publications in internationally recognised scientific peer-reviewed journals as well as a PhD degree.

The Registration will be valid for a period of five years. Renewal of Registration should be requested as stated in **Decree 5**.

Decree 5. Renewal of Registration

Requests for Renewal of Registration must be submitted to and will be judged by the Registration Committee Toxicology (RT) of the NVT. Request based on a complete dossier that can be assessed by the RT should be submitted at least 3 months before the Registration expires.

For Renewal of Registration the professional activities of the Toxicologist must provide evidence of current activities in the field of toxicology. In addition, the RT uses a system of quantitative requirements (credits) appreciating both “sending” and “receiving” activities (see [Re-registration](#)) on the procedure and requirements of Renewal of Registration).

When requirements for the Renewal of Registration are not met, the RT has the option to make the Renewal conditional.

The renewed Registration will be valid for a period of five years, after which one can again apply for Renewal.

Additional information

Forms for admission and (renewal of) registration can be [downloaded](#) from the NVT website <https://toxicologie.nl/formulieren>

The administration of the registration procedure is taken care by the office of the KNCV. The address of the Registration Committee Toxicology is:

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