



1. TITLE OF THE CERTIFICATE (NL)

Diploma Beroepsonderwijs
Kwalificatie: Mechatronicus
Kwalificatiedossier: Machinebouw mechatronica

In the original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Certificate Senior Secondary Vocational Education
Qualification: Mechatronics technician
Qualification file: Mechanical engineering mechatronics

This translation has no legal status

3. PROFILE OF SKILLS AND COMPETENCES

The most important duties of a Mechatronics technician are:

Core task 1: Produces sub-products and builds machines and/or mechatronic products together

- 1.1 Prepares work
- 1.2 Produces the assembly base of the machine
- 1.3 Produces sub-products
- 1.4 Places parts by means of connection techniques
- 1.5 Connects parts and sub-products
- 1.6 Instructs and supervises less experienced colleagues
- 1.7 Supervises work

Core task 2: Tests machines and/or mechatronic products

- 2.1 Prepares work
- 2.2 Regulates and adjusts machine/mechatronic product
- 2.3 Tests machines and mechatronic products by means of test plan
- 2.4 Assists programmer, operating technician and/or electro technician with testing prototypes
- 2.5 Supervises test activities
- 2.6 Manages and archives test data

Core task 3: Installs and maintains machines and/or mechatronic products and sets these

- 3.1 Prepares work
- 3.2 Installs machines and mechatronic products
- 3.3 Regulates, sets and aligns machines and mechatronic products
- 3.4 Performs maintenance and servicing work
- 3.5 Makes modifications to machines, equipment and installations
- 3.6 Instructs and supervises less experienced colleagues
- 3.7 Supervises installation and maintenance work
- 3.8 Administers and archives data

Core task 4: Designs mechatronic (sub)products

- 4.1 Collects and shares technical information
- 4.2 Makes technical sketch

*** Explanatory note**

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: <http://www.europass.cedefop.europa.eu/>

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3. PROFILE OF SKILLS AND COMPETENCES

4.3 Make a detailed plan of and elaborate mechatronic design

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE

The Mechatronics technician mainly works in medium-sized and larger metalworks firms that belong to the machine and appliances construction sector. This includes both supply companies that deliver semi-finished products and companies that produce the complete final product, such as mechatronic products and/or machines.

5. OFFICIAL BASIS OF THE CERTIFICATE

<p>Name and status of the body awarding the certificate The certificate issued on completion of the programme is signed by the examination board at the school where the pupil attended the programme.</p>	<p>Name and status of the national/regional authority providing accreditation/recognition of the certificate Ministry of Education, Culture and Science</p>																				
<p>Level of the certificate (national or international) Qualification level 4 of the Dutch VET qualification structure Characteristics: non-job related skills such as tactical and strategic capacities. The professional bears his or her own responsibility, which is not only related to practical implementation in terms of monitoring and supervision, but also a more formal, organisational responsibility. The range of tasks also includes drafting new procedures. NLQF level 4 - EQF level 4 - ISCED 3A</p>	<p>Grading scale / Pass requirements</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">10</td><td>excellent</td></tr> <tr><td>9</td><td>very good</td></tr> <tr><td>8</td><td>good</td></tr> <tr><td>7</td><td>very satisfactory</td></tr> <tr><td>6</td><td>pass</td></tr> <tr><td>5</td><td>fail</td></tr> <tr><td>4</td><td>unsatisfactory</td></tr> <tr><td>3</td><td>very unsatisfactory</td></tr> <tr><td>2</td><td>poor</td></tr> <tr><td>1</td><td>very poor</td></tr> </table>	10	excellent	9	very good	8	good	7	very satisfactory	6	pass	5	fail	4	unsatisfactory	3	very unsatisfactory	2	poor	1	very poor
10	excellent																				
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6	pass																				
5	fail																				
4	unsatisfactory																				
3	very unsatisfactory																				
2	poor																				
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<p>Access to next level of education/professions The level 4 Mechatronics technician can broaden into level 4 technician electro technical industrial products and systems, level 4 service technician electrotechnology and planner/draughtsman. He can also develop into specialist for manager in the field of mechatronic products and systems. A level 4 certificate gives access to hbo. Technical/ physics hbo programmes such as Mechanical engineering, Electrotechnics, Technical business administration, Industrial product design and General operational technique are the most obvious, and they make a career development into designer/product developer/project leader possible.</p>	<p>International agreements The profession of Mechatronics technician is not regulated in the Netherlands. However the education and training for this profession on qualification level 4 is regulated under the European directive 2005/36/EC, amended by directive 2013/55/EU. The regulated education and training gives access to regulated professions at the level of a diploma according to article 11 of this directive.</p>																				
<p>Legal basis Act on Vocational Education and Training (WEB), registered number of qualification (crebo): 94262 The education and training for this qualification is offered as of August 1, 2008.</p>																					

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Senior secondary vocational education features two learning pathways: the school-based pathway (bol) and the training on the job pathway (bbi).

In the school-based pathway, the majority of the course consists of theory at school. The extent of the practical component (vocational practice) is between 20% and 60%. In the training on the job pathway, the extent of vocational practice is at least 60% of the course. The participant works four days a week in a training company, and attends school for theory subjects just one day a week.

In principle it is possible to follow both learning pathways, but which pathway is offered will depend on the individual educational institution.

Average duration of the education/ training leading to the certificate	4 year(s) (6400 study hours) (depending on previous education)
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Entry requirements

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

The certificate preparatory vocational secondary education (vmbo) advanced vocational programme, combined programme, or theoretical programme, or a comparable level.

7. ADDITIONAL INFORMATION

Dutch senior secondary VET is based on qualification files, that each contain one or more qualifications. The information in section 3 and 4 is drawn directly from the qualification file, that is composed by the Centre of Expertise. The complete qualification file is available at www.kwalificatiesmbo.nl, only in Dutch.

Additional information, including a description of the Dutch national qualifications system, is available at the Netherlands National Reference Point (NRP) for VET: www.nlntp.nl

SBB has been appointed by the Ministry of Education, Culture and Science as NRP.