

CERTIFICATE SUPPLEMENT (*)

1. TITLE OF THE CERTIFICATE (NL)

Diploma Beroepsonderwijs
Kwalificatie: Researchinstrumentmaker
Kwalificatiedossier: Precisie techniek
In the original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Certificate Senior Secondary Vocational Education
Qualification: Research instrument maker
Qualification file: Precision technology
This translation has no legal status

3. PROFILE OF SKILLS AND COMPETENCES

The most important duties of a research instrument maker are:

Core task 1: Processes materials.

- 1.1 Does preparatory work for materials processing
- 1.2 Makes machine ready for production
- 1.3 Carries out materials processing
- 1.4 Measures and checks his own work
- 1.5 Completes materials processing
- 1.6 Maintains equipment

Core task 2: Makes and tests CNC-programmes

- 2.1 Prepares the writing of CNC-programme
- 2.2 Writes CNC-programmes for materials processing and sets up and adjusts CNC-machines.
- 2.3 Test CNC-programmes for materials processing.
- 2.4 Performs CNC-processing.
- 2.5 Manages and archives product data

Core task 3: Produces components for instruments.

- 3.1 Does preparatory work for making components.
- 3.2 Makes components

Core task 4: Builds and tests instruments.

- 4.1 Does preparatory work for the building and testing of instruments.
- 4.2 Builds instruments from components.
- 4.3 Tests instruments.
- 4.4 Delivers the instrument.

* 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/>

© European Communities 2002 - Version 2010

3. PROFILE OF SKILLS AND COMPETENCES

Core task 5: Designs prototypes
 5.1 Analyses product specifications
 5.2 Makes sketches and designs prototypes.

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

The Research instrument maker works for supplying companies in different industries such as the machine industry, vehicle industry, electro technical industry, medical industry, and the optical industry. He works with both conventional and fully automated machines. The Research instrument maker makes complex, composite and single products. He makes use of several production technologies while working with a variety of materials.

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 border="0"> <tr><td>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																				
9	very good																				
8	good																				
7	very satisfactory																				
6	pass																				
5	fail																				
4	unsatisfactory																				
3	very unsatisfactory																				
2	poor																				
1	very poor																				
<p>Access to next level of education/professions The Research instrument maker is within the field of precision technology a final post. He could, though, expand himself in the direction of a work planner, for instance, or another profession such as a designer or a structural engineer. Furthermore, there are possibilities of moving on to hbo (higher professional education) and study one of the following technical studies: mechanical engineering, Applied physics, Electro technology or a teacher training.</p>	<p>International agreements The profession of Research instrument maker 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): 25301 The education and training for this qualification is offered as of August 1, 2015.</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 (bbl).
 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.

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Average duration of the education/ training leading to the certificate

4 years (6400 study hours) (depending on previous education)

Entry requirements

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 included in part 3 and 4 is derived directly from the qualification file determined by the Minister of Education, Culture and Science. The complete qualification file can be found at <http://kwalificaties.s-bb.nl/>, only in Dutch.

Optional subjects are linked to the qualification. The optional subjects have a total size of 15% of the course duration. The optional subjects completed by the student are listed on the certificate.

Additional information, including a description of the Dutch national qualifications system, is available at the Netherlands National Reference Point (NRP): www.s-bb.nl. The NRP is the information centre for vocational qualifications in the Netherlands. SBB has been appointed in this capacity by the Ministry of Education, Culture and Science.