

## 1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 3 en  
**FMEM0411 FABRICACIÓN DE MOLDES PARA LA PRODUCCIÓN DE PIEZAS POLIMÉRICAS Y DE ALEACIONES LIGERAS**

## 2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 3 in  
**FMEM0411 MANUFACTURE OF MOULDS AND POLYMER AND LIGHT ALLOY PIECES**  
 (This translation has no legal status)

## 3. PROFILE OF SKILLS AND COMPETENCES

The holder of this certificate will have acquired the **general competence** to design and manufacture moulds for polymer and light metal pieces, and to adjust, fit and check their operation; plan the production, while ensuring criteria of quality and complying with the company's occupational risk prevention and environmental plans and with current law. This general competence is divided into the following **skills units** (UC):

- Design moulds to obtain polymer and light metal pieces (UC2151\_3).
- Plan the manufacture of moulds to obtain polymer and light metal pieces (UC2152\_3).
- Prepare mould components for obtaining polymer and light metal pieces (UC2153\_3).
- Adjust, fit and check the operation and mould components (UC2154\_3).

The professional skills are acquired through the **learning outcomes** defined within the related Training Modules (MF):

- Design of moulds to obtain polymer and light metal pieces (MF2151\_3).
- Planning of the manufacture of moulds to obtain polymer and light metal pieces (MF2152\_3).
- Preparation of mould components for obtaining polymer and light metal pieces (MF2153\_3).
- Fitting, mounting and checking of the function of the mould components (MF2154\_3).
- Practical training at the workplace in Manufacture of moulds for the production of polymer and light alloy pieces (MP0470)

(See legal basis for all learning outcomes information acquired by the holder of this Certificate in each MF).

As a reference the learning outcomes include in the Practical training at the workplace that complete and reinforce the learning outcomes acquired in the other training modules, are:

- Collaborate on the design of moulds, defining their form, dimensions, construction solutions and cost.
- Collaborate on the preparation of programs for manufacturing moulds and their fitting, based on technical documentation, according to available resources.
- Mechanise the components of moulds, preparing and manipulating lathes, machining centres, grinding and electrical discharge machines.
- Carry out adjustments, mounting and tests of the moulds according to the design specifications, complying with the occupational risk prevention and environmental protection standards.
- Take part in the company's working processes, following the rules and instructions established at the workplace.

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

The holder of this certificate may work in the areas of planning and production in companies dedicated to the design, construction, adjustment and fitting of moulds for the production of polymer and light metal pieces. The holder may work in the subsector of the metal transforming industry, above all in the following economic activities: metal casting and injection moulding. The most pertinent occupations and positions are:

- Design draughtsman of moulds for polymer and light metal pieces.
- CAD technician of moulds for polymer and light metal pieces.
- CAD technician for developing moulds for polymer and light metal pieces.
- Fitter of moulds for polymer and light metal pieces.
- Mould fitting foreman.
- Mould production programmer.
- Technical industrial designer.
- Die and moulding technician.

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

- Smelting process technician.
- Metal die and moulding operator.
- Machine tool fitter with CNC for working with metals.

#### 5. OFFICIAL BASIS OF THE CERTIFICATE

##### Name and status of the national/regional authority providing accreditation/recognition of the certificate

The Ministry of Employment and Social Security or the corresponding autonomous regional administration within the scope of its competence, in the name of the King. The certificate is valid throughout Spain.

##### Level of the certificate

The Professional Certificate Level 3 of the National Repertoire of Professional Certificates corresponds to level 4 of the International Standard Classification of Education (ISCED-P 2011).

The European Qualification Framework (EQF) level:

##### Grading scale/Pass requirements

The grading scale and pass level of the training modules are expressed on a scale of 0 to 10. The minimum score for a pass is 5 in every training module including a pass in the practical training at the workplace module.

The grading system is as follows:

- FAIL: 0 to 4.9
- PASS-SATISFACTORY: 5 to 6.9
- PASS-GOOD: 7 to 8.9
- PASS-EXCELLENT: 9 to 10

##### Access to next level of education/training

This Professional Certificate Level 3 gives access to Professional Certificate Level 3 within the same professional area and family.

For validation purposes, the educational authorities will recognise the professional module or modules of the VET diplomas corresponding to the skills units included in the training modules of this certificate.

##### Legal basis

Royal Decree 618/2013 of 2 August, establishing four professional certificates in the professional family Metal working, which are included in the National Repertoire of Professional Certificates and update the professional certificates established in Appendices I and II of Royal Decree 1521/2011 of 31 October. (Appendix IV, Code: FMEM0411)

#### 6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

This certificate may be acquired by:

1. Training: Completion with a pass grade of the face-to-face or online training programme.
2. Recognition of the professional skills acquired through professional experience or non-formal training (prior learning): Completion of a process of skills evaluation and accreditation in all the skills units making up the professional certificate.
3. Dual training: Completion of a training and apprenticeship contract, which may range from 1 year (or 6 months, if stipulated as such in the collective agreement) to 3 years, during which effective working time is combined with time dedicated to training under the training programme for the professional certificate.

The training method (number 1 above) requires successful completion of the training modules and the practical training at the workplace:

Description of vocational training received	Percentage of total programme (%)	Duration (hours)
Training modules	94	590

Practical training at the workplace	6	40
<b>Total duration of training leading to the certificate</b>		<b>630</b>
<p><b>Entry/access requirements:</b></p> <ul style="list-style-type: none"> <li>- <i>Bachiller</i> Diploma (upper secondary education); or</li> <li>- Professional Certificate Level 2 in the same professional area.</li> <li>- If neither of the above or higher certifications are held, a pass in the key skills tests.</li> </ul> <p><b>Additional information:</b> Professional certificates are instruments for official accreditation of the professional qualifications in the National Catalogue of Professional Qualifications for all economic activities, within the scope of the labour administration. The National Repertoire of Professional Certificates is divided into three qualification levels (Level 1, Level 2 and Level 3), and by sectors into 26 professional families and 102 professional areas. More information is available at: <a href="http://www.sepe.es">www.sepe.es</a></p> <p>National Europass Centre: <a href="http://www.oapee.es">www.oapee.es</a></p>		

(\*) **Explanatory note:** This document is designed to provide additional information about the specified certificate, but has no 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://europass.cedefop.eu.int>

## Information on Professional Certificates of the Map of Qualifications and Vocational Training in Spain

