

1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 3 en
FMEM0409 DISEÑO DE MOLDES Y MODELOS PARA FUNDICIÓN O FORJA

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 3 in
FMEM0409 MOULDS AND MODELS DESIGN FOR CASTING OR FORGING
(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 moulds for casting, forging or stamping and models for casting, using criteria of quality, safety and respect for the environment. This general competence is divided into the following **skills units** (UC):

- Design moulds and models for the process of casting or forging (UC0111_3).
- Automate mould operation processes (UC0112_3).
- Prepare the technical documentation for the cast or model (UC0113_3).

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

- Development of moulds and models (MF0111_3).
- Automation of the moulding process (MF0112_3).
- Technical documentation for moulds and models (MF0113_3).
- Practical training at the workplace in moulds and models design for casting or forging (MP0123)

(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:

- Design moulds and models for casting or forging.
- Establish the operational sequence and type of technology (electric, pneumatic, hydraulic) to be used in automating the casting or forging processes, complying with the standards governing occupational and environmental risk prevention.
- 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 area of industrial design applied to the sector of casting, injection or forging moulds or models. The holder may work in the electro-mechanical subsector in companies engaged in: casting, injection and forging; metal casting; casting of other materials; casting, stamping and cupping; powder metallurgy; construction of machinery and mechanical equipment. The most pertinent occupations and positions are:

- CAD technician.
- Mould development technician.
- Design draughtsman.
- Technical industrial designer.
- Die and moulding technician.
- Forging process technician.
- Smelting process technician.
- Lamination process technician.

5. OFFICIAL BASIS OF THE CERTIFICATE	
<p style="text-align: center;">Name and status of the national/regional authority providing accreditation/recognition of the certificate</p> <p>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.</p>	
<p style="text-align: center;">Level of the certificate</p> <p>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).</p> <p>The European Qualification Framework (EQF) level:</p>	
<p style="text-align: center;">Grading scale/Pass requirements</p> <p>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.</p> <p>The grading system is as follows:</p> <ul style="list-style-type: none"> - FAIL: 0 to 4.9 - PASS-SATISFACTORY: 5 to 6.9 - PASS-GOOD: 7 to 8.9 - PASS-EXCELLENT: 9 to 10 	
<p style="text-align: center;">Access to next level of education/training</p> <p>This Professional Certificate Level 3 gives access to Professional Certificate Level 3 within the same professional area and family.</p> <p>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.</p>	
<p style="text-align: center;">Legal basis</p> <p>Royal Decree 684/2011 of 13 May, establishing twelve professional certificates in the professional family Metal working, which are included in the National Repertoire of Professional Certificates.(Appendix I, Code: FMEM0409)</p>	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE		
<p>This certificate may be acquired by:</p> <ol style="list-style-type: none"> 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. <p>The training method (number 1 above) requires successful completion of the training modules and the practical training at the workplace:</p>		
Description of vocational training received	Percentage of total programme (%)	Duration (hours)
Training modules	88	610
Practical training at the workplace	12	80
Total duration of training leading to the certificate		690

Entry/access requirements:

- *Bachiller* Diploma (upper secondary education); or
- Professional Certificate Level 2 in the same professional area.
- If neither of the above or higher certifications are held, a pass in the key skills tests.

Additional information: 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: www.sepe.es

National Europass Centre: www.oapee.es

(*) **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

