

# Diploma in Manufacturing and Product Design

## Gateway 2 Diploma Line Guidance

### Key Messages:

The Diploma in Manufacturing and Product Design (MPD) will provide a motivating and broad-based programme of study. It will introduce learners to the breadth of the manufacturing environment and industries through a holistic applied learning approach, utilising practical delivery methods to bring alive the theory behind 'learning about manufacturing'. Within manufacturing there is a vast array of career opportunities for new entrants, and great potential for personal success and wealth creation. The MPD Diploma will allow learners to explore the opportunities available and to develop the skills, knowledge and attributes that they will need to succeed in manufacturing or to progress into further and higher education.



Learners will be required to explore manufacturing processes from the design / prototype stage through to production, marketing and selling. They will be expected to work on an enterprise project – covering all elements of manufacturing including researching, planning and designing a product, making the product, and marketing it. This broad range of content is a key strength of the MPD Diploma, giving learners an insight into all areas of activity within manufacturing.

Consortia must understand the importance of providing breadth in the scope of manufacturing within their delivery of the Diploma content through;

- Broadening the learners understanding of all aspects of manufacturing and covering the extent and range of manufacturing industries;
- Giving learners an understanding of three key themes common to all manufacturing industries (business & enterprise, product design & materials science, and production systems);
- Addressing the principal learning content in a manner that enables learners to gain a broad understanding of different aspects of manufacturing, particularly at Foundation and Higher levels. The Advanced Level should provide a more in-depth understanding allowing specialisation through specific pathways or broad specialist areas relating to sub-sectors of manufacturing;



Existing qualifications, such as Design and Technology, are popular but cannot in themselves provide the full range of knowledge, understanding and skills that are required by employers in manufacturing. The MPD Diploma, however, will require learners to explore all aspects of manufacturing across a range of sectors. A significant strength of the MPD Diploma is the central role of Business and Enterprise as a theme, which addresses important skills and knowledge areas important to employers and lacking to some extent in other qualifications.

We recommend that consortia clearly articulate what their strengths are in the responses to the questions in the application form. Please phrase your responses in an evidence-based manner, giving relevant examples where appropriate. Do not assume that assessors have prior knowledge of your consortium, its manufacturing background, its members and their history, and what makes it a viable and effective organisation to deliver the MPD Diploma.

## SPECIFIC GUIDANCE

### B1 DIPLOMA COMPONENTS

#### 1 Understanding the specific needs and breadth of the Diploma line and how the delivery model will address this

Consortia will be expected to demonstrate how their provision will meet the aims and rationale of the Manufacturing & Product Design Diploma as outlined in the Line of Learning Statement and what makes it different to any previous manufacturing provision offered by the consortium.

Consortia must be able to show evidence of an integrated approach between consortium partners with regard to the holistic delivery across both the Principal and Specialist Learning. The strongest applications will show an in-depth understanding of breadth of content within all three themes and the different sectors of manufacturing that are featured in the MPD Diploma at all levels.

Please explain the particular 'sectoral' strengths or specialist manufacturing provision there is within the consortium from the five sectors represented within the MPD Diploma (Chemicals, Polymers & Pharmaceuticals; Textiles & Apparel; Food Manufacturing; Engineering; and Process Manufacturing). Consortia should also detail what plans there are to develop these strengths with each manufacturing sector associated with the Diploma.

#### 2 Record of previous delivery in the subject areas of the Diploma line

The MPD Diploma is a new qualification that will provide young people with a rounded learning experience using a thematic approach to Manufacturing focusing on three themes – Business & Enterprise, Product Design & Materials Science, and Production Systems.

Consortia are therefore advised to report records of previous delivery by describing the current *manufacturing* provision delivered across the partnership. In support of this, consortia are advised to provide brief details of achievement and provision in other related areas of the Diploma e.g. Business, D & T, Applied Science or Materials Science and specialist sector subjects.

Please demonstrate how members of the consortium with appropriate CoVE or specialist status share this expertise across the consortium.

#### 3 Clear allocation of programme delivery roles to the various partner institutions within an integrated programme

You should explain how responsibilities, both strategic and operational, are allocated amongst the consortium partners. Which institution will be the overall lead in the consortium and outline which institutions will be responsible for delivering and assessing specific themes or topics across each level of the Diploma.

Please explain how the consortium will track learning and delivery across each level of the Diploma and also how this will link in with the implementation of quality assurance across the partnership.

The strongest applications will describe plans for managing timetables and movement of students/teachers between partners to support delivery of different aspects of the Diploma in specific locations. Consortia should also provide details of how demand will be managed and students selected along with the numbers planned at each level from each institution.

#### **4 Appropriate arrangements for the numbers of learners projected for the Diploma line and their progression into relevant employment or HE**

The MPD Diploma will provide a unique opportunity for learners to develop in equal measure the know-how essential for starting employment and the knowledge required to enter university whilst at the same time exploring the diverse world of manufacturing.

Consortia should be able to provide evidence of existing progression routes to FE, HE, training and employment at all levels of the Diploma. Evidence of links with HE Institutions and Apprenticeship providers in the local area should also be provided in support of this. Where the consortium has identified gaps in the local progression they should outline what future plans there are to address this shortfall in provision.

You should explain how careers education guidance is currently delivered; describe current activities and future plans and how the consortium will involve employer input e.g. careers evenings, mentors, case studies, ambassadors. Please indicate how IAG around this Diploma will be presented, building on what you say in answer to Section A2 in this Application Form

Consortia are advised to detail strategies to challenge stereotypes, whether gender or race, and to raise aspirations for all learners.

The strongest applications from consortia will be able to show evidence of the consortium's capacity to deliver the Diploma at each level, details of plans to meet needs for staff and other resources including facilities. Please describe how gaps from your current skills audit will be resolved either through recruitment and/or training of current staff including planned CPD for all staff to be involved in the MPD Diploma including industrial updating and 14-16 teaching.

## **B2 FACILITIES**

### **1 Ensuring access to high quality applied and practical teaching and learning, simulating conditions in the workplace where appropriate**

The Diploma in Manufacturing and Product Design has been designed to provide a motivating and broad-based programme of study, introducing learners to the breadth of the manufacturing environment and industries through a holistic applied learning approach. At least 50% of principal learning should be applied learning; as such the content has been designed in a way as to align itself with practical delivery methods to bring alive the theory behind 'learning about manufacturing'.

Please give evidence of all manufacturing facilities and resources, real/actual, virtual and/or simulated across the partnership. (A strong application will provide more detail than stating "access to a workshop" – details of the equipment contained therein should be given.)

Consortia should describe facilities and equipment across the partnership in relation to the following five sectoral lines;

- Chemicals, Polymers & Pharmaceuticals ([www.cogent-ssc.com](http://www.cogent-ssc.com))
- Engineering & Manufacturing Technologies ([www.semta.org.uk](http://www.semta.org.uk))
- Food Manufacturing ([www.improveltd.co.uk](http://www.improveltd.co.uk))
- Process Manufacturing ([www.proskills.co.uk](http://www.proskills.co.uk))
- Textiles & Apparel ([www.skillfast-uk.org](http://www.skillfast-uk.org))

Please provide details of an audit of current facilities against Diploma requirements, identifying any gaps. Describe action plans for resolving the gaps including timescales and the source of funding. You should explain how the partnership will ensure continual updating of all manufacturing equipment.

**2 Allocation of clear responsibility for managing specialist facilities and ensuring access for the whole consortium**

Consortia are advised to indicate all existing and planned arrangements for managing facilities. Further to this, the consortia should identify any issues that have arisen with regard to access to facilities and resources particularly the needs of disadvantaged groups of learners, and how these issues are to be resolved.

**B3 EMPLOYER ENGAGEMENT**

**1 Engagement with industry and other sectors**

Consortia will be required to provide evidence of employer engagement directly linked to manufacturing provision throughout the partnership. Working with manufacturing employers is the key to the successful delivery of the Diploma.

Strong applications will be able to show evidence of current engagement with manufacturing industries with regard to curriculum related work placements or other work related learning. Please provide details of employers engaged (not just a number, but names of employers and information about engagement – e.g. activities on which the employer and school have previously worked together and confirmation of number of planned work experience placements).

Please provide details of the strategies for employer engagement undertaken by the consortium and give details how the consortium will engage with more employers. You should provide details of which sectors of Manufacturing Industry you have the most productive engagement with or are most prevalent in your local area.

**2 Employer involvement in planning, delivery and evaluation of the Diploma line**

Consortia should provide evidence on how employers have been involved in the strategic planning and proposed delivery of work related personalised learning plans for individual learners. Please describe how students/employers will be prepared for work experience including pre-visits, inductions, organised activities, etc. How will employers be supported to assist in the delivery of the curriculum within the schools environment and how they will be also prepared to support learners in their own workplace?

The strongest applications will show evidence of involvement in planning of visits, ambassadors, mentors, curriculum development, teacher placements and the loan of or access to specialist facilities or resources that support delivery of the Diploma.

**3 Offering realistic learning environments and high quality applied learning**

Consortia should provide evidence about all aspects of work related learning both current and planned. Work-related learning is any form of activity where a person either experiences and/or completes a learning orientated task that relates directly to the world of work and/or a specific industry. It can take place in a number of settings, including on an employer's premises or in an educational establishment. The strongest applications will provide details of the involvement of employers and other key stakeholders in the planning, delivery and evaluation of any real, virtual or simulated learning environments, facilities, exercises and/or resources.

Consortia should provide details of work experience/placements, describing the commitment of named employers and how many manufacturing placements are available, and how work experience will be followed up.