

# October 2017 Proposal to develop a new apprenticeship standard

## Page 1: Proposal to develop a new apprenticeship standard

Q1. Please confirm that you have read the "How to" guide for Trailblazers on gov.uk (see link here), that you are content that this proposal meets all the criteria for final approval set out within it and that you have discussed the proposal with a relevant Route Relationship Manager within the Institute (Please specify who).

I have read the 'how to' guide for Trailblazers on gov.uk? Yes

Name of my Relationship Manager

Bhavena Patel

Q2. Name of proposed trailblazer group

Technicians Prosthetics and Orthotics

Q3. Are you an existing Trailblazer Group already with approval to develop other standard(s)? If yes or partly, please provide full details.

No, this will be a new group

Q4. Name of proposed apprenticeship standard(s).

Apprenticeship Standard for Prosthetic and Orthotic Technicians.

Q5. Is this a proposed core and options standard? If yes, please give the titles for each of the options.

No

Q6. How many standards are you proposing to develop? Please be aware that commitment from at least 10 employer members for each proposed standard is required.

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Q7. Will there be a requirement for additional new standards to be developed in the future? If so, please provide brief details of what these will be.

No

Q8. Have you submitted a proposal for an apprenticeship standard in this role(s) before? If yes, please give details below including comments from the (pre April 2017) DfE approvals panel or the Institute.

No

Q9. Please insert details about each proposed standard below.

	Name of occupation	Proposed level of the standard	Proposed as a degree apprenticeship?	Intended to replace/partly replace an existing apprenticeship Framework? [if so please give details]	Do you expect any age restrictions to apply to this standard?	Estimated annual take-up across entire relevant sector(s) (This is separate to the number of apprentices that each individual employer group member will take on)	When do you estimate this apprenticeship would be ready to deliver starts?
1	Technician Prostheticst and Orthotics	3	no	no	no	50	September 2018
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-

Q10. <https://www.gov.uk/government/publications/apprenticeship-standards-in-development> Please provide any relevant information below regarding potential overlap with other Trailblazer standards published or in development. It is important that you review your proposal against all other apprenticeships published and in development to confirm there is no significant overlap, in overall occupation or in the content of potential skills/knowledge/behaviours. Where there is potential of any overlap, we ask that you contact the existing Trailblazer(s) before submitting a new proposal to discuss whether the existing standards would cover your needs (or email [apprenticeship.trailblazers@education.gov.uk](mailto:apprenticeship.trailblazers@education.gov.uk)). Please then provide below full details of any possible overlap identified, interaction with relevant Trailblazers, and any relevant further detail explaining why this occupational role is sufficiently unique to still justify separate apprenticeship standard. The existing list of standards in development, is here [The list of existing published standards and Trailblazer contact details, is here](#)

No overlap with other standards. There is a TB developing a Prosthetist/Orthotist Degree apprenticeship for practitioners working directly with clients requiring a bespoke device, through their evaluation and need of the clients they will write a prescription ordering the device which the technician will design and build. Employers can employ both prosthetists/ orthotists practitioners and technicians. Both roles complement each other. There is an element of engineering required for the role in terms of material knowledge and technical skills. However, the skills of interaction with patients and healthcare professionals as well as knowledge and understanding of human anatomy and the requirements to replace support human function makes this a unique occupation. The technicians provide a unique service that works alongside and supports the specific Healthcare professionals of Prosthetist/ Orthotists.

Q11. Please provide a full description below of what the occupational role involved (or roles in the case of a proposed core and options standard). The information you provide here is crucial to our assessment of whether the occupational role is suitable for an apprenticeship, so please be as comprehensive as possible, and always refer to the criteria and guidance set out in the "How to" guide for Trailblazers. In particular, the information should include: Main duties and responsibilities - please set out clearly what someone in this occupation will actually be doing; the range of environments/sectors/industries in which someone in this occupation could work; a summary of key competencies/skills etc required for full occupational competence; how the occupational role typically fits within the wider work hierarchy; who would they be working with, and what is the usual relationship between the roles.

Definition:

The workforce produces the devices used in Prosthetics and Orthotics. A prosthesis is a device that replaces a missing body part. Orthoses are fitted to improve function, reduce deformity or support weakness of an existing body part. The number of patients with an amputation or congenital limb deficiency attending specialist rehabilitation services in the UK is estimated at 55,000 to 60,000. The number of patients attending orthotic services is estimated at 1.2 million in 2007.

What is a Prosthetist / Orthotic Technician:

Prosthetic / Orthotic Technicians make devices that aid movement, correct deformity and relieve discomfort for individuals using those devices designed to replace, support or improve the functioning of a limb or the spine. Clinical conditions they work with may include the following (list is not exhaustive): scoliosis, polio, spina bifida, multiple sclerosis, stroke, rheumatoid arthritis, diabetes and cerebral palsy. Some of the end users of the devices may have congenital conditions such as being born with a limb missing or a limb or spine that has not formed fully; others have lost a limb through trauma from being in an accident or during military service; and others have lost a limb or part of limb due to disease as a result of a condition like diabetes. As people's conditions and requirements may change over time and technologies improve or change. The devices need to be changed / upgraded.

The Technician follows the specification / prescription determined by the Prosthetist/Orthotist. In prosthetics this is an artificial limb (protheses) in orthotics it can be a range of devices from diabetic footwear to spinal bracing. These devices are medical devices and must comply with the Medical and Healthcare products Regulatory Agency (MHRA) legal framework for medicine and medical devices.

The Prosthetic / Orthotic Technicians work closely with the Prosthetists / Orthotists who are responsible for patients in their care who need prostheses /orthoses.

The devices are generally custom made to suit the individual requirements of the patient. The Technician will use the prescription from the prosthetist / orthotist to, make the device. They will be able to:

- Use appropriate materials in Prosthetics and Orthotics design and fitting orthoses eg braces, callipers and splints
- Prepare and maintain environments, materials and equipment for the routine design and manufacture of custom made devices
- Design and manufacture custom made devices to fitting stage to meet the prescription
- Prepare components for custom made devices
- Be familiar with the relevant medical terms to describe body segments and function
- Review the specification / prescription and advise if there any issues which may cause difficulty in the production of the device
- Advise the Prosthetists/Orthotists of potential technical solutions to achieve the goals for the patient
- Construct the device using computer technology for the various stages of customised fitting
- Ensure the finished product meets all the relevant national and international standards for safety
- Carry out finishing of custom made devices
- Provide technical assistance with the fitting of custom made devices
- Be able to communicate effectively with healthcare professionals and service users

Ongoing Support:

- Work directly with patients requiring mechanical repairs to their devices
- Provide on-going maintenance for devices to support life time care
- Deliver rehabilitation and support for service users dealing with long term illnesses
- Carry out rectification of casts/CAD models to meet the prescription
- Provide technical assistance with the fitting of custom made devices
- Carry out modifications to custom made devices
- Carry out repairs to custom made devices
- Advise on the suitability of existing, new and emerging technology and materials for routine custom made devices

Where they work?

Q11. Please provide a full description below of what the occupational role involved (or roles in the case of a proposed core and options standard). The information you provide here is crucial to our assessment of whether the occupational role is suitable for an apprenticeship, so please be as comprehensive as possible, and always refer to the criteria and guidance set out in the "How to" guide for Trailblazers. In particular, the information should include: Main duties and responsibilities - please set out clearly what someone in this occupation will actually be doing; the range of environments/sectors/industries in which someone in this occupation could work; a summary of key competencies/skills etc required for full occupational competence; how the occupational role typically fits within the wider work hierarchy; who would they be working with, and what is the usual relationship between the roles.

Prosthetic/Orthotic technicians work for organisations who predominantly provide products and services on behalf of the NHS. The majority are employed by commercial organisations who contract to the NHS.

Q12. Please provide an overview of the knowledge, skills and behaviours required for these roles.

Apprentices learn how to assess, diagnose and treat people requiring prosthetic and orthotic care. They work under the supervision of fully qualified Prosthetists/ Orthotists.

Skills - Prosthetics and Orthotics technicians are able to:

- Prepare and maintain environments, materials and equipment for the routine design and manufacture of custom made devices
  - Produce duplicate models
  - Prepare routine components for custom made devices
  - Design and manufacture routine custom made devices to fitting stage to meet the prescription
  - Carry out routine finishing of custom made devices
  - Provide technical assistance with the fitting of custom made devices
  - Carry out routine modifications to custom made devices
  - Carry out routine repairs to custom made devices
  - Advise on the suitability of existing, new and emerging technology and materials for routine custom made devices
  - Prepare and maintain environments, materials and equipment for the non-routine design and manufacture of custom made devices
  - Prepare non-routine components for custom made devices
  - Design and manufacture non-routine custom made devices to fitting stage to meet the prescription
  - Carry out non-routine finishing of custom made devices
  - Carry out non-routine modifications to custom made devices
  - Carry out non-routine repairs to custom made devices
  - Provide technical assistance with the fitting of non-routine custom made devices
  - Advise on the suitability of existing, new and emerging technology and materials for non-routine custom made devices
  - Determine the suitability of new and emerging technology and materials for custom made devices
  - Produce positive casts prior to rectification
  - Carry out rectification of casts to meet the prescription
  - Use environments, materials and equipment for the routine design and manufacture of custom made devices
  - Demonstrate a logical and systematic approach to problem solving
- Demonstrate Good communication skills
  - Solve problem during designing and manufacturing by presenting different solutions to ensure each device is unique and successful for the service user

Knowledge - Prosthetics and Orthotics Technicians know and understand:

- Anatomy and Physiology for Orthotics and Prosthetics
- Biomechanics for Orthotics and Prosthetics
- Metal Component Manufacture
- Plastic Component Manufacture
- Safety Engineering and the Environment
- Orthotics :  
Foot, Ankle, knee, upper limb and spinal Orthotics
- Prosthetics  
Upper limb, lower limb, footwear

Behaviours:

Prosthetic /Orthotic Technicians work as part of a team and have respect for other team members. They appreciate that the devices they construct are used by people with disabilities and are committed to using their skills to maximise the benefit of those devices to enhance the lives of the patients.

Q13. How will the apprenticeship allow the individual to develop transferable skills to perform the role in a business of any size or relevant sector?

On completion the apprentice is eligible to apply to work in any organisation in the provision of prosthetics and orthotics or other areas of rehabilitation products e.g specialist wheelchairs. The practical skills gained working with metal, plastics, composites and knowledge gained could be used in a number of sectors.



Q23. Email address of any other individuals to be copied into correspondence

**Email 1**

**Email 2**

**Email 3**

**Email 4**

**Email 5**

Q24. Do you have a copy of the draft standard? If so, please include it with your submission.

**Add comments below:**  
No

Q25. In future, Technical Education will be arranged around the common framework of 15 technical education routes identified in the Sainsbury Review. These encompass all employment-based and college-based activity. The aim of these new routes is to facilitate the progress of young people from compulsory schooling into skilled employment and the highest levels of technical competence. A technical route could be followed either through an apprenticeship or in a college where the training would be supported by a substantial work placement, with both programmes being based on employer-designed occupational standards. In light of this, we have introduced a new criterion requiring any standard approved for development to align with one of the 15 technical routes. Details of the 15 routes can be found on page 22 of the Government Skills Plan here. Please detail which of the 15 Sainsbury Technical Education Routes your standard(s) aligns to. Also, if an occupational map is available for this route, there will be a link to it on the "How to" Guide for Trailblazers webpage. Please refer to this and specify which occupation detailed in the route map your proposed standard covers.

	<b>Proposed Standard (s)</b>
<b>Agriculture, Environmental and Animal Care</b>	-
<b>Business and Administrative</b>	-
<b>Catering and Hospitality</b>	-
<b>Childcare and Education</b>	-
<b>Construction</b>	-
<b>Creative and Design</b>	-
<b>Digital</b>	-
<b>Engineering and Manufacturing</b>	-
<b>Hair and Beauty</b>	-
<b>Health and Science</b>	Technician Prosthetics and Orthotics
<b>Legal, Finance and Accounting</b>	-
<b>Protective Services</b>	-
<b>Sales, Marketing and Procurement</b>	-
<b>Social Care</b>	-
<b>Transport and Logistics</b>	-