

SSBIO02 Digital Pattern Maker – Biomedical Garments

1. Job role

TCF sub-sector	Biomedical Textiles
Functional area	Manufacturing – Rehabilitation, Compression and Disability Support Textiles Production
Job role	SSBIO02 Digital Pattern Maker – Biomedical Garments
Job role description	Develops, modifies and manages digital patterns for biomedical garments, ensuring precise fit, therapeutic performance and manufacturability in regulated production environments. In the Australian biomedical textiles sector—where products such as compression garments, orthopaedic supports and rehabilitation textiles must meet strict clinical and regulatory standards—the Digital Pattern Maker plays a critical role linking clinical requirements, product design and manufacturing execution. The role involves translating body measurements, clinical prescriptions and design specifications into accurate digital patterns using CAD systems. The position works closely with fitting specialists, product designers, clinicians and production teams to ensure garments deliver correct pressure gradients, anatomical fit and functional performance while remaining efficient to manufacture.
Performance expectations	- Producing accurate digital patterns aligned to clinical specifications - Ensuring correct anatomical fit and compression performance - Supporting efficient manufacturing and minimising material waste - Maintaining version control and traceability of patterns - Integrating feedback from fittings and production into pattern revisions - Ensuring compliance with quality and regulatory requirements - Supporting rapid turnaround for custom and made-to-measure garments - Following WHS and digital data management procedures
Specialisation	Compression garment pattern engineering, digital pattern development, made-to-measure systems, anatomical modelling, CAD-based garment construction
Application in other TCF sectors	- Technical apparel and performance wear - Orthotics and prosthetics manufacturing - Defence and protective textiles - Advanced fashion and bespoke tailoring

	Wearable technology product development.
--	--

2. Key tasks and critical work functions

Key tasks	- Creating digital garment patterns using CAD software - Translating clinical measurements and prescriptions into pattern specifications - Adjusting patterns for pressure gradients and anatomical fit - Modifying patterns based on fitting feedback and trial results - Maintaining pattern libraries and version control systems - Collaborating with fitting specialists and clinicians - Supporting sampling and prototyping processes - Ensuring patterns are production-ready and compliant
Critical work functions	- Ensuring garments achieve required therapeutic compression and fit - Maintaining accuracy and consistency in digital pattern outputs - Supporting efficient and scalable production of custom garments - Preventing fit-related defects and product failures - Maintaining traceability and documentation of design changes - Enabling integration between clinical input and manufacturing processes - Supporting continuous improvement in garment performance

3. Technical skills

Digital pattern making	Creating and modifying patterns using CAD systems
Anatomical measurement interpretation	Translating body measurements into garment structures
Compression engineering	Designing patterns to achieve specific pressure gradients
CAD software proficiency	Using specialised garment design software
Pattern grading and scaling	Adjusting patterns for size variations and custom fits
Product construction knowledge	Understanding seams, panels and textile behaviour
Data and version control	Managing digital files and pattern revisions
Quality compliance	Ensuring patterns meet regulatory and production standards

4. Generic Skills

Attention to detail	Ensuring precision in pattern development
Analytical thinking	Interpreting measurements and clinical requirements
Problem solving	Resolving fit and construction challenges
Communication	Collaborating with clinicians, designers and production teams

Time management	Managing multiple custom orders and deadlines
Creativity within constraints	Designing functional garments within clinical parameters
Professionalism	Maintaining data integrity and compliance

5. Emerging skills

Emerging skills	• 3D body scanning integration into pattern systems • Automated pattern generation and AI-assisted design • Digital twin and virtual garment simulation • Integration with wearable sensor technologies • Advanced smart textiles and adaptive garments • Cloud-based collaboration and digital manufacturing workflows
-----------------	--

6. VET Qualifications and Skill Sets

Entry-level preparation	MST50122 Diploma of Apparel, Fashion and Textiles
Advanced development	MST60122 Advanced Diploma of Apparel, Fashion and Textiles or Degree in Fashion Technology, Textile Engineering, Biomedical Product Design or related field

7. Job progression

Possible job progression	Pattern Making Assistant → Digital Pattern Maker → Senior Pattern Maker → Product Development Technologist → Technical Design Manager
--------------------------	---

8. Classification

Australian Qualifications Framework	Level 4-6
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2-3
Open Source Classification of Occupations for Australia (OSCA)	Digital Pattern Maker / Technical Designer - Biomedical Garments



Skills Insight is a Jobs and Skills Council funded by the Australian Government Department of Employment and Workplace Relations.