

SSAPP29 Digital Knitwear Programmer / Knit CAD Technician

Disclaimer

These Occupational Frameworks and Skill Profiles have been developed as workforce planning, occupational mapping and skills reference resources for the Australian textile, clothing and footwear (TCF) industry. They are intended to describe the typical functions, responsibilities, skills and capabilities associated with occupations across the industry.

These documents are not intended to replace or override industrial instruments or employment arrangements, including awards, enterprise agreements, employment contracts, position descriptions, classification structures, licensing or regulatory requirements, or other statutory obligations. Where differences arise, the relevant industrial, legislative or regulatory requirements take precedence. The Skill Profiles should be used as complementary reference documents to support workforce planning, career development, training and skills recognition.

1. Job role

TCF sub-sector	Apparel
Functional area	Knitwear Production
Job role	SSAPP29 Digital Knitwear Programmer / Knit CAD Technician
Job role description	Develops and manages digital knitting programs used to produce knitwear garments on computerised knitting machines. The role involves translating design specifications into machine-readable knitting programs, testing knit structures, adjusting stitch parameters and supporting production teams operating advanced knitting equipment such as whole garment and seamless machines.
Performance expectations	• Develop knitting programs for computerised knitting machines. • Translate garment design specifications into knit structures. • Test and refine knitting programs to achieve correct garment construction. • Collaborate with designers and production teams to optimise knitwear production. • Ensure knitting programs deliver accurate sizing and garment shape. • Support machine operators during production troubleshooting. • Maintain digital records of knitwear programs and product specifications. • Contribute to continuous improvement of knitwear manufacturing processes.
Specialisation	Digital knitwear programming, knit CAD software operation, whole garment knitting technology and integration of design and production in knitwear manufacturing.

Application in other TCF sectors	• Technical textile production using advanced knitting technologies. • Footwear manufacturing using knitted uppers. • Digital apparel product development environments. • Textile production environments integrating CAD-driven manufacturing technologies.
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2. Key tasks and critical work functions

Key tasks	• Create digital knitting programs using knit CAD software. • Interpret garment design files and specifications. • Adjust stitch structures, yarn feeds and knitting parameters. • Conduct sample knitting trials and evaluate garment results. • Optimise knitting programs for production efficiency. • Collaborate with machine operators and technicians. • Document knitting programs and production settings. • Support product development and prototyping activities.
Critical work functions	• Ensuring knitwear garments are produced accurately from digital programs. • Maintaining consistency between design and production outcomes. • Optimising knitting programs for quality and efficiency. • Reducing sampling time and material waste. • Supporting advanced knitwear manufacturing technologies. • Ensuring digital production systems operate effectively.

3. Technical skills

Knit CAD software operation	Use specialised knitwear CAD systems to develop knitting programs.
Digital garment programming	Translate garment designs into machine knitting instructions.
Knitting machine technology	Understand operation of modern computerised knitting machines.
Yarn and stitch structure knowledge	Select stitch structures appropriate for garment design.
Sample development	Conduct sampling trials to test knit programs.
Production optimisation	Refine programs to improve knitting efficiency and garment quality.
Data management	Maintain digital records of knitwear programs and product specifications.
Workplace safety	Follow WHS practices in textile production environments.

4. Generic Skills

Attention to detail	Ensure digital knitting programs produce accurate garments.
Problem solving	Identify programming or machine issues affecting production.
Communication	Work with designers, technicians and operators.
Teamwork	Collaborate across design and production teams.

Time management	Meet development timelines and production deadlines.
Innovation	Contribute to development of new knitwear products.

5. Emerging skills

Emerging skills	• 3D knitwear design integration. • Advanced seamless knitting technologies. • Digital product development workflows. • AI-supported knitwear programming tools. • Integration of knitwear design with digital supply chains.
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6. VET Qualifications and Skill Sets

Entry-level preparation	MST40122 Certificate IV in Textile Design and Technology or equivalent.
Advanced development	MST50122 Diploma of Apparel, Fashion and Textiles or equivalent and / or a higher level qualification in Fashion Design, Textile Technology or Digital Product Development.

7. Job progression

Possible job progression	Knitting Machine Operator → Knit CAD Technician → Digital Knitwear Programmer → Knitwear Production Technologist
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8. Classification

Australian Qualifications Framework	AQF Level 4-6
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 3
Open Source Classification of Occupations for Australia (OSCA)	399434 Garment Technician



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