

Production & Logistics Courses Offered

Detailed course content as per SAQA requirements



AiR

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Apply quality procedures

Unit Standard Number: 13234

NQF Level: 03

Credits: 8

PURPOSE OF THE UNIT STANDARD:

The skills, values and knowledge reflected in this unit standard are required by people in the field of manufacturing and engineering. The learning outcomes in this unit standard also contribute to the exit level outcomes required for various manufacturing and engineering qualifications. Qualifying learners can perform quality procedures in their work area. They are able to demonstrate an understanding of quality assurance requirements and relate and apply these in their work.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:

SPECIFIC OUTCOME 1

Explain and discuss the quality assurance system and quality objectives, standards and elements:

- An understanding of the quality assurance system and quality objectives, standards, elements and quality specific requirements in work area is demonstrated.
- Quality procedures and standards are adhered to in work area.
- Quality problems in work area are recognised and reported in a timely manner.

SPECIFIC OUTCOME 2

Apply quality procedures and standards in work area.

SPECIFIC OUTCOME 3

Handle and care for instruments and gauges related to quality processes.

SPECIFIC OUTCOME 4

Recognise and report on quality problems in work area.

Demonstrate an understanding of the principles of manufacturing and assembly logistics planning

Unit Standard Number: 116292

NQF Level: 04

Credits: 12

PURPOSE OF THE UNIT STANDARD:

Learners involved in manufacturing and assembly logistics require the skills, values and knowledge reflected in this unit standard. Learners credited with this unit standard are able to demonstrate understanding of the concepts and principles utilised in the establishment of business and production plans. Learners are required to understand the nature of these plans, identify and interpret critical issues, components and the establishment process.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:

SPECIFIC OUTCOME 1

Demonstrate an understanding of the interfaces and interactions of a manufacturing and assembly strategic business plan:

- Major goals and objectives of the organisation.
- Strategic horizon.
- The need for a sound business plan.
- Vision, mission, goals, targets, objectives and the measurement thereof.
- Business plan includes plans describing the strategic direction of the organisation.

SPECIFIC OUTCOME 2

Identify critical issues relating to strategic planning:

- Critical issues relevant to the strategy.
- Importance of the relevant interfaces.
- Availability of critical resources.
- Micro and macro environment.

SPECIFIC OUTCOME 3

Demonstrate an understanding of the Master Production Plan / Schedule (MPP / MPS) as an output of the Strategic / Business plan:

- Factors involved in the process of developing the MPS / MPP.
- Different planning horizons and time buckets.
- Alternative scenarios to satisfy the required input parameters.

SPECIFIC OUTCOME 4

Demonstrate an understanding of the uses of the Master Production Plan / Schedule (MPP / MPS):

- Detailed production schedule.
- Material requirements planning (MRP).
- Distribution plans.

SPECIFIC OUTCOME 5

Demonstrate an understanding of the importance of the customer in the business process chain (internal and external):

- Customer needs and expectations.
- Satisfying customer needs in terms of planning.
- Customer focus in business performance.

Determine manufacturing and assembly material requirements

Unit Standard Number: 116294

NQF Level: 04

Credits: 12

PURPOSE OF THE UNIT STANDARD:

Learners involved in manufacturing and assembly logistics require the skills, values and knowledge reflected in this unit standard. Qualifying learners are able to plan for and determine material requirements in a global logistics environment to support the achievement of production schedule. They are further able to identify problems and take appropriate corrective action.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:

SPECIFIC OUTCOME 1

Identify the inputs into Material Requirements Planning (MRP).

SPECIFIC OUTCOME 2

Calculate basic material requirements.

SPECIFIC OUTCOME 3

Demonstrate an understanding of inventory in raw material, Work in Progress (WIP) and finished goods and the measurement of the effectiveness thereof.

SPECIFIC OUTCOME 4

Discuss and explain the material requirements planning and inventory processes.

Monitor the quality of the input materials and the manufactured plastic product

Unit Standard Number: 119139

NQF Level: 02

Credits: 12

PURPOSE OF THE UNIT STANDARD:

To perform effectively in the field of plastics manufacturing. The qualifying learner will be able to monitor the quality of input materials, the process and manufactured product. To gain an understanding of basic machine operations, the different types of plastics, the products made from them and the basic concepts of quality. Learners can be assessed against this unit standard in the context of any volume plastics manufacturing process.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:

SPECIFIC OUTCOME 1

Conduct visual checks on incoming materials and components and the manufactured product.

SPECIFIC OUTCOME 2

Measure products, components and materials and conduct operational on-line tests.

SPECIFIC OUTCOME 3

Recognise defects and mark or remove defective materials, products or components.

SPECIFIC OUTCOME 4

Record production and defects and report incidents.

SPECIFIC OUTCOME 5

Receive and respond to instructions, information or communications.

SPECIFIC OUTCOME 6

Respond to 'what', 'what if' and 'why' questions related to monitoring the quality of the input materials and the manufactured product:

- All non-conforming products, components and materials are marked or removed from the production line.
- All defective products, components and materials are recorded and reported.
- Total range of checks is regularly and consistently performed.
- Measuring instruments and equipment are used and stored correctly and safely.
- A clean and tidy work environment is maintained.
- Records are legible, accurate and conform to set standards.
- Incidents and deviations are reported immediately and accurately.
- Instructions, information and communications are responded to quickly and appropriately.
- My answers to questions show that I know what I should be doing, why I am doing it and why I should be doing it this way.

Understand, implement, maintain and monitor general quality standards within the air-conditioning, refrigeration and ventilation industries

Unit Standard Number: 9505

NQF Level: 04

Credits: 8

PURPOSE OF THE UNIT STANDARD:

Ensure that persons employed in the air-conditioning, refrigeration and ventilation industries understand and are capable of implementing, maintaining and monitoring standards as specified by the International Standards Organisation (ISO), and will embrace a policy of effective quality assurance.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:

SPECIFIC OUTCOME 1

Understand the general quality standards as recommended by the ISO:

- The definition of "product" as set out in the ISO/IEC guide 2 and ISO 8402 1994 is stated, explained and discussed.
- Commitment to quality is acknowledged.
- The fact that the procedures that form part of the quality system shall be dependent on the complexity of the work and the methods used is acknowledged, explained and discussed.
- The fact that the skills and training required is dependent on the complexity of the work is acknowledged, explained and discussed.

SPECIFIC OUTCOME 2

Implement the general quality standards as recommended by the ISO:

- The accessibility and availability of adequate resources and personnel as required in terms of suitable equipment and working environment is ensured.
- The procedures for controlling and verifying the design of products are ensured.
- Identification of products by suitable means is ensured.
- Identification of products for reference purposes is recorded.

- The procedures for performing, verifying and reporting that servicing meets the specified requirements are met.

SPECIFIC OUTCOME 3

Maintain the general quality standards as recommended by the ISO:

- All statutory and regulatory requirements and other reference standards or codes indicated or reflected in procedures are abided by.
- Availability of appropriate documents at all locations where operations essential to the effective functioning of the quality system are performed is ensured.
- Invalid and/or obsolete documents are removed promptly from all points of issue or use or otherwise assured against unintended use.
- Adequate functionality of inspection, measuring and test equipment is ensured and methods explained.
- Inspection and test status of inspection, measuring and test equipment is identifiable by suitable means.
- Corrective or preventive action to eliminate the cause of actual or potential non-conformities is taken.
- The maintenance of quality records to demonstrate conformance to specified requirements and the effective operation of the quality system is ensured.

SPECIFIC OUTCOME 4

Monitor the general quality standards as recommended by the ISO.

- Compliance with the procedures for the control of verification, storage and maintenance of customer-supplied products is ensured.
- The requirement, where results of processes are specified in terms of inspection and testing activities are met.
- Unintended use or installation of non-conforming products is prevented.
- The procedures for handling, storage, packaging, preservation and delivering products are adhered to in order to prevent damage and/or deterioration to product.
- The application of statistical techniques, where required for establishing, controlling and verifying process capability and product characteristics is ensured.
- Purchased products conform to specified requirements.
- Self and other personnel performing activities affecting quality are adequately trained to carry out these activities.

Schedule and monitor production

Unit Standard Number: 116287

NQF Level: 04

Credits: 12

PURPOSE OF THE UNIT STANDARD:

Qualifying learners are able to plan and prepare for, detail schedule and monitor the flow of production in a manufacturing and assembly logistics environment. They are further able to identify problems and take appropriate corrective action.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA:

SPECIFIC OUTCOME 1

Prepare for detailed scheduling activity:

- Plan detail scheduling process.
- Source requirements.
- Source data.
- Communicate scheduling requirements.

SPECIFIC OUTCOME 2

Schedule production:

- Identify current plant production status.
- Identify requirements according to production plan and specific constraints.
- Select appropriate time buckets.
- Compile schedule.
- Check and release schedule.

SPECIFIC OUTCOME 3

Monitor production:

- Identify critical parameters.
- Determine monitoring methods and frequency.
- Compare production status and progress against schedule.

SPECIFIC OUTCOME 4

Identify non-conformances, determine their cause and take corrective action:

- Prioritise according to risk and impact.
- Establish appropriate emergency plans.
- Communicate with process partners.
- Collate feedback and co-ordinate further communication.

SPECIFIC OUTCOME 5

Report production achievements:

- Identify critical interfaces and issues for reporting.
- Compile and process reports.
- Report to a range of appropriate stakeholders.

SPECIFIC OUTCOME 6

Discuss and explain the detailed production scheduling and monitoring process.