

Das Know-how.

REFA

REFA Training Planning and Control

Description of the modules



REFA Course Planning and Control

Your know-how basis in Industrial Engineering

Customer oriented order processing require planning strategies to prepare production data and manage information flow. To minimize lead-time and keep dead-lines the methods and tools of work and process planning must be known and used effectively. Competitive production and service processes require the effective utilization of workforce, material and equipment. Planning, distribution and utilization of resources cannot be done without mastering efficient methods of materials and capacity management.

YOUR TOPIC – TARGET GROUPS

- Production planning and control as well as CIP team leaders and -moderators.
- Professionals and managers from production and order management, planning and scheduling, industrial engineering, logistics and distribution.
- Plant and operations managers, experts and managers from logistics, production planning and control, supply chain management and industrial engineering.

YOUR BENEFIT – COMPETENCE

- The participants are introduced to planning and controlling and learn which methods should be applied to optimise production processes.
- The participants obtain an overview on the methodological tools to plan and to design material and capacity management as well as throughput times which contribute to cost savings, quality improvement and schedule reliability.
- This knowledge enables the participants to judge the expenditure and organisational measures linked to the planning and controlling of production processes in rough outlines.

Special emphasis is placed on getting-to-know selected tools and in particular their use in practical day-to-day application.

The basic variant includes 6 modules which consist of 80 seminar lessons.



n ^o	Module name	Lessons (1 lesson = 45 minutes)
1	Planning Strategies and Methods	6
2	Numbering - Coding	2
3	Planning Instruments – product structure, parts lists, usage references	10
4	Work Planning	10
5	Processes – Planning, Throughput Time, Scheduling	16
6	Capacity Management	18
7	Material Management	18
	Total lessons	80

Module Features

Module 1: Planning Strategies and Methods



BENEFIT

- The planning, design and control of business operations under different conditions, the planning of the necessary resources and their effective use, and the identification and preparation of the necessary data are important tasks of production management.
- All these are essential processes of rational management in a labor devised environment.

LEARNING GOALS

In this unit the participants:

- learn the basic tasks of planning, design and control in order fulfilment process,
- become familiar with the „REFA standard programming and control“ as a reference solution for order processing and
- learn the principles of selected basic planning strategies and
- will get an overview of specific methods of production planning and control.

CONTENT

- Planning Principles
- REFA-Standardprogram Planning and Control
- Selected Planning Strategies
- Special methods of production planning and control

Module Features

Module 2: Numbering – Coding



BENEFIT

- The numbering system is a structure of identifying or classifying elements of numbers, letters and special characters. The goal of the numbering system is to create a unique way identifying any object or process with the smallest possible economic and organizational effort. The fundamentals of numbering are first discussed here and the methods for creation of numbering systems are illustrated here.
- Besides the use of numbering systems can by using codes, such as color codes, bar codes and transponder systems for faster data transmission can be ensured and the error rate can be reduced by directly entering the data at source. A more accurate and easier controlling and thus faster response to changes in the sequence is possible.

LEARNING GOALS

In this unit the participants:

- will be familiarized with the basic classifications of the numbering of familiar products
- earn the basic classifications possibilities of coding of products

CONTENT

- Numbering systems
- Coding systems

Module Features

Module 3: Planning Instruments – product structure, parts lists, usage references



BENEFIT

- Products consist of raw materials, parts and component. They are ready-to-use sell-able items created by the manufacturing process. They can be structured according to their assembly or requirements assessment perspective.
- Put into a tabular form raw materials, parts and components become Bill of Materials in their various forms (analytical approach). The synthesis leads to the Usage List. Bill of Materials can be used for various tasks such as engineering-design, manufacturing, assembly and material deployment.

LEARNING GOALS

In this unit the participants:

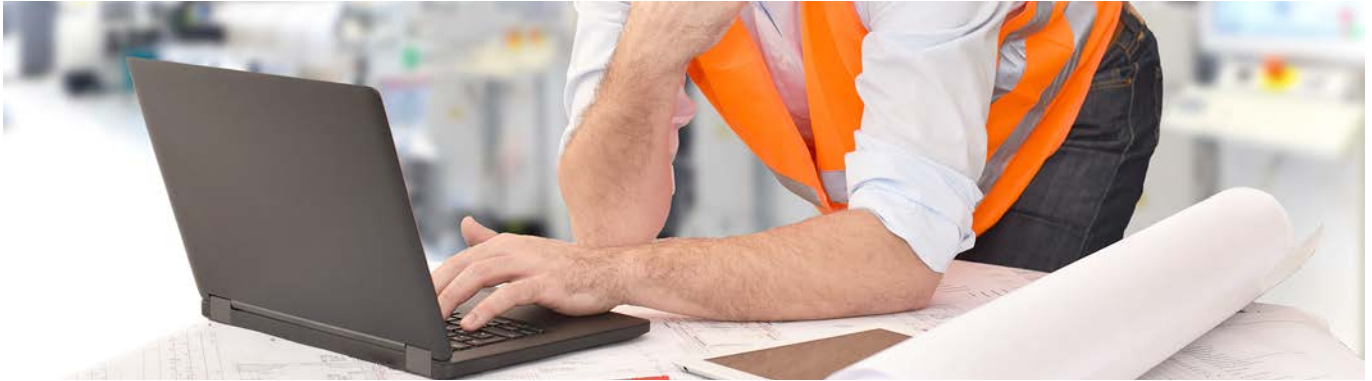
- learn how products are structured under different aspects,
- learn about different bills of material and their design for product structuring,
- will receive an overview of the use of bills of materials and
- will learn about the basic structure and different types of usage references.

CONTENT

- Product Structure
- Bill of Materials
- Usage List

Module Features

Module 4: Work Planning



BENEFIT

- Work plans are important and vital documents for the planning and control of production processes. However, their use goes far beyond into e.g. material and capacity management, quality management or controlling.
- Derivate documents based on work plan are used for job control and support the implementation of the work plan in various forms.

LEARNING GOALS

In this unit the participants:

- learn about the deployment and use of work plans,
- will receive an overview of the structure, forms and design of work plans,
- will learn about the standard REFA work plan,
- will use the REFA standard program „work plan preparation“ to develop and maintain a work plan and
- will receive an overview on follow-up and linked additional documents.

CONTENT

- Deployment and use of work plans
- Structure, types of work plans
- Content and design of work plans
- REFA Standard Work Plan

Module Features

Module 5: Processes – Planning, Throughput Time, Scheduling



BENEFIT

- Time schedules and scheduling serve to establish the instants and terms of partial tasks and the chronological sequence of tasks to execute the work task.
- Similarly to the work plan, the time schedule belongs to the order independent work papers, which arise in the course of planning. The scheduling is one of the controlling tasks. It is performed, as a rule, for orders or for term related offers.
- Methods, which are applied to the scheduling and time scheduling, make a common basis for the determination of the throughput times.
- With the time data of the throughput time and in consideration of calendar and other dates, the times and terms can be determined.

LEARNING GOALS

In this unit we will present the various types of lead-time and how process-throughput-times is calculated. The participants:

- will learn the definitions of terms,
- learn how to characterize processes using typical indicators and elements,
- learn the different types and methods of order scheduling and
- will learn about a systematic approach - the REFA standard program Process Design.

CONTENT

- Process Indicators and Elements
- Throughput Time
- Scheduling
- Process Design - Approach

Module Features

Module 6: Capacity Management



BENEFIT

- Company assets provide for the generation of products and services are grouped under the term resources. The optimal use of resources within the value-adding process determines the company's competitiveness on the market.
- For companies with emphasis on the technical processes the capacity management (facilities, equipment and staff) is primarily relevant for the planning and control of production or service processes.

LEARNING GOALS

In this unit the importance of capacity determination for order processing is presented and the participants will learn:

- about the importance of capacity inventory and requirement as a planning factor for order processing,
- the basics of staff level and requirements determination and
- the basics of equipment inventory and requirements determination.

CONTENT

- From Sales Plan to Production Order
- Work System Capacity
- Workforce Planning and Control
- Equipment Planning and Control

Module Features

Module 7: Material Management



BENEFIT

- Planning and control the resource material or materials management is a vital part of company resource planning. Today reliable on-time and on-quantity supply of customers and sales markets with products and spare-parts in the right quantity and quality is a top priority. In this context materials are the biggest cost block in the manufacturing industry.
- This results in one of the most important task of materials management – to ensure the most efficient execution of materials planning and control effectively utilizing the interrelation of company, customers and suppliers.

LEARNING GOALS

In this unit the participants will learn about:

- targets and tasks of Material Management within Resource Planning,
- different Methods of materials requirement planning and Control,
- different Methods of Material Inventory Planning and Control,
- different Methods of Material Procurement Planning and Control and
- different Methods of Material Disposition.

CONTENT

- Materials Management and Resource Planning,
- Materials Requirement Planning and Control,
- Materials Inventory Planning and Control,
- Materials Procurement Planning and Control
- Material Distribution

Your contact



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