Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
validating the Waster Schedule		validating the Master Genedale	
Term Master scheduling		Term Master scheduler	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Master schedule		Term Master production schedule (MPS)	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Scheduling		Term Master schedule item	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Multilevel master schedule APICS CPIM Learning System	@ 2022	Term Two-level master schedule APICS CPIM Learning System	© 2023

Often the job title of the person charged with the responsibility of managing, establishing, reviewing, and maintaining a master schedule for select items. Ideally, the person should have substantial product, plant, process, and market knowledge because the consequences of this individual's actions often have a great impact on customer service, material, and capacity planning. See: master production schedule.

The process where the master schedule is generated and reviewed and adjustments are made to the master production schedule to ensure consistency with the production plan. The master production schedule (the line on the grid) is the primary input to the material requirements plan. The sum of the master production schedules for the items within the product family must equal the production plan for that family.

A line on the master schedule grid that reflects the anticipated build schedule for those items assigned to the master scheduler. The master scheduler maintains this schedule, and in turn, it becomes a set of planning numbers that drives material requirements planning. It represents what the company plans to produce, expressed in specific configurations, quantities, and dates. [This] is not a sales item forecast that represents a statement of demand. It must take into account the forecast, the production plan, and other important considerations such as backlog, availability of material, availability of capacity, and management policies and goals. See: master schedule.

A format that includes time periods (dates), the forecast, customer orders, projected available balance, available-to-promise, and the master production schedule. It takes into account the forecast; the production plan; and other important considerations such as backlog, availability of material, availability of capacity, and management policies and goals. See: master production schedule.

A part number selected to be planned by the master scheduler. [It] is deemed critical in its impact on lower-level components or resources such as skilled labor, key machines, or dollars. Therefore, the master scheduler, not the computer, maintains the plan for these items. [This] may be an end item, a component, a pseudo number, or a planning bill of material.

The act of creating a schedule, such as a shipping schedule, master production schedule, maintenance schedule, or supplier schedule.

A master-scheduling approach in which a planning bill of material is used to master schedule an end product or family, along with selected key features (options and accessories). See: hedge, multilevel master schedule, production forecast. A master scheduling technique that allows any level in an end item's bill of material to be master scheduled. To accomplish this, MPS items must receive requirements from independent and dependent demand sources. See: two-level master schedule.

Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Overstated master production schedu	ıle	Term Product load profile	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Materials management		Term Product structure	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Priority		Term Product configuration catalog	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Planning bill of material	0.0555	Term Feature	0.0000
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A listing of the required capacity and key resources needed to manufacture one unit of a selected item or family. The resource requirements are further defined by a lead-time offset to predict the impact of the product on the load of the key resources by specific time period. [This] can be used for roughcut capacity planning to calculate the approximate capacity requirements of the master production schedule. See: bill of resources, resource profile, rough-cut capacity planning.

A schedule that includes either past due quantities or quantities that are greater than the ability to produce, given current capacity and material availability. [This] should be made feasible before MRP is run.

The sequence of operations that components follow during their manufacture into a product. A typical product structure shows raw material converted into fabricated components, components put together to make subassemblies, subassemblies going into assemblies, and so forth.

The grouping of management functions supporting the complete cycle of material flow, from the purchase and internal control of production materials to the planning and control of work in process to the warehousing, shipping, and distribution of the finished product.

A listing of all upper-level configurations contained in an end-item product family. Its application is most useful when there are multiple end-item configurations in the same product family. Used to provide a transition linkage between the end-item level and a two-level master production schedule. Also provides a correlation between the various units of upper level product definition.

In a general sense, the relative importance of jobs (i.e., the sequence in which jobs should be worked on). It is a separate concept from capacity.

A distinctive characteristic of a good or service. The characteristic is provided by an option, accessory, or attachment. For example, in ordering a new car, the customer must specify an engine type and size (option), but need not necessarily select an air conditioner (attachment). See: accessory, attachment, option.

An artificial grouping of items or events in bill-of-material format used to facilitate master scheduling and material planning. It may include the historical average of demand expressed as a percentage of total demand for all options within a feature or for a specific end item within a product [family...] Syn: planning bill. See: hedge, option overplanning, production forecast, pseudo bill of material.

Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Production forecast		Term Option overplanning	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Common parts bill of material		Term Modular bill of material	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Super bill of material		Term Projected available balance (PAB)	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Batch APICS CPIM Learning System	© 2023	Term Lot APICS CPIM Learning System	© 2023

Typically, scheduling extra quantities of a master schedule option greater than the expected sales for that option to protect against unanticipated demand. This schedule quantity may be planned only in the period where new customer orders are currently being accepted, typically just after the demand time fence. This technique is usually used on the second level of a two-level master scheduling approach to create a situation where more of the individual options than of the overall family are available. The historical average of demand for an item is quantified in a planning bill of [material. This concept] is accomplished by increasing this percentage to allow for demands greater than forecast. See: demand time fence, hedge, planning bill of material

A projected level of customer demand for a feature (option, accessory, etc.) of a make-to-order or an assemble-to-order product. Used in two-level master scheduling, it is calculated by netting customer backlog against an overall family or product line master production schedule and then factoring this product's available-to-promise by the option percentage in a planning bill of material. See: assemble-to-order, planning bill of material, two-level master schedule.

A type of planning bill that is arranged in product modules or options. It is often used in companies where the product has many optional features (e.g., assemble-to-order companies such as automobile manufacturers). See: pseudo bill of material.

A type of planning bill that groups common components for a product or family of products into one bill of material, structured to a pseudoparent item number. Syn: common parts bill.

An inventory balance projected into the future. It is the running sum of on-hand inventory minus requirements plus scheduled receipts and planned orders. Syn: projected available inventory.

A type of planning bill, located at the top level in the structure, that ties together various modular bills (and possibly a common parts bill) to define an entire product or product family. The quantity per relationship of [this bill] to its modules represents the forecasted percentage of demand of each module. The master-scheduled quantities of [this bill] explode to create requirements for the modules that also are master scheduled. See: pseudo bill of material.

A quantity produced together and sharing the same production costs and specifications. See: batch.

1) A quantity scheduled to be produced or in production. See: process batch, transfer batch. 2) For discrete products, [a quantity] planned to be the standard batch quantity, but during production, the standard batch quantity may be broken into smaller lots. See: lot [, standard batch quantity]. 3) In nondiscrete products, [...] a quantity that is planned to be produced in a given time period based on a formula or recipe that often is developed to produce a given number of end items. 4) A type of manufacturing process used to produce items with similar designs; it also may cover a wide range of order volumes. Typically, items ordered are of a repeat nature, and production may be for a specific customer order or for stock replenishment. See: project manufacturing.

Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Pegging		Term Rough-cut capacity planning (RCCF	?)
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Capacity planning using overall factors (CPOF)		Term Bill of labor	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section A: Creating and Validating the Master Schedule		Module 4 Section A: Creating and Validating the Master Schedule	
Term Resource profile		Term Work center	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section B: Using and Maintaining the Master Schedule		Module 4 Section B: Using and Maintaining the Master Schedule	
Term Cumulative lead time APICS CPIM Learning System	0.000	Term Time fence APICS CPIM Learning System	© 2023

The process of converting the master production schedule into requirements for key resources often including labor, machinery, warehouse space, suppliers' capabilities, and, in some cases, money. Comparison to available or demonstrated capacity is usually done for each key resource. This comparison assists the master scheduler in establishing a feasible master production schedule. Three approaches to performing [this] are the bill of labor (resources, capacity) approach, the capacity planning using overall factors approach, and the resource profile approach. See: bill of resources, capacity planning, capacity planning using overall factors, product load profile, resource profile.

In MRP and MPS, the ability to identify for a given item the sources of its gross requirements and/or allocations. [This] can be thought of as active where-used information. See: requirements traceability.

A structured listing of all labor requirements for the fabrication, assembly, and testing of a parent item. See: bill of resources, capacity bill procedure, routing. A rough-cut capacity planning technique. The master schedule items and quantities are multiplied by the total time required to build each item to provide the total number of hours to produce the schedule. Historical work center percentages are then applied to the total number of hours to provide an estimate of the hours per work center to support the master schedule. This technique eliminates the need for engineered time standards. Syn: overall factors. See: bill of resources, capacity planning, resource profile, rough-cut capacity planning.

A specific production area, consisting of one or more people and/or machines with similar capabilities, that can be considered as one unit for purposes of capacity requirements planning and detailed scheduling. Syn: load center.

The standard hours of load placed on a resource by time period. Production lead-time data is taken into account to provide time-phased projections of the capacity requirements for individual production facilities. See: bill of resources, capacity planning using overall factors, product load profile, rough-cut capacity planning.

A policy or guideline established to note where various restrictions or changes in operating procedures take place. For example, changes to the master production schedule can be accomplished easily beyond the cumulative lead time, while changes inside the cumulative lead time become increasingly more difficult to a point where changes should be resisted. [It] can be used to define these points. See: demand time fence, hedge, planning time fence.

The longest planned length of time to accomplish the activity in question. It is found by reviewing the lead time for each bill of material path below the item; [this term is defined by whichever path adds up to the greatest number]. Syn: aggregate lead time, combined lead time, composite lead time, critical path lead time, stacked lead time. See: planning horizon, planning time fence.

Module 4 Section B: Using and Maintaining the Master Schedule		Module 4 Section B: Using and Maintaining the Master Schedule	
Term Demand time fence (DTF)		Term Planning time fence	
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Module 4 Section B: Using and Maintaining the Master Schedule		Module 4 Section B: Using and Maintaining the Master Schedule	
Term Order entry		Term Order promising	
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Module 4 Section B: Using and Maintaining the Master Schedule		Module 4 Section B: Using and Maintaining the Master Schedule	
Term Available-to-promise (ATP)		Term Available inventory	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section B: Using and Maintaining the Master Schedule		Module 4 Section B: Using and Maintaining the Master Schedule	
Term On-hand balance APICS CPIM Learning System	@ 2022	Term Discrete available-to-promise APICS CPIM Learning System	© 2023

A point in time denoted in the planning horizon of the master scheduling process that marks a boundary inside of which changes to the schedule may adversely affect component schedules, capacity plans, customer deliveries, and cost. Outside [of this], customer orders can be booked and changes to the master schedule can be made within the constraints of the production plan. Changes inside [of this] must be made manually by the master scheduler. Syn: planning fence. See: cumulative lead time, demand time fence, firm planned order, planned order, planning horizon, time fence.

1) That point in time inside of which the forecast is no longer included in total demand and projected available inventory calculations; inside this point, only customer orders are considered. Beyond this point, total demand is a combination of actual orders and forecasts, depending on the forecast consumption technique chosen. 2) In some contexts, [this] may correspond to that point in the future inside which changes to the master schedule must be approved by an authority higher than the master scheduler. Note, however, that customer orders may still be promised inside [this] without higher authority approval if there are quantities available-to-promise (ATP). Beyond [this term], the master scheduler may change the MPS within the limits of established rescheduling rules without the approval of higher authority. See: option overplanning, planning time fence, time fence.

The process of making a delivery commitment (i.e., answering the question, "When can you ship?"). For make-to-order products, this usually involves a check of uncommitted material and availability of capacity, often as represented by the master schedule available-to-promise. Syn: customer order promising, order dating. See: available-to-promise, order service.

The process of accepting and translating what a customer wants into terms used by the manufacturer or distributor. The commitment should be based on the available-to-promise (ATP) line in the master schedule. This can be as simple as creating shipping documents for finished goods in a make-to-stock environment, or it might be a more complicated series of activities, including design efforts for make-to-order products. See: master schedule, order service.

The on-hand inventory balance minus allocations, reservations, backorders, and (usually) quantities held for quality problems. Often called beginning available balance. Syn: beginning available balance, net inventory.

1) In operations, the uncommitted portion of a company's inventory and planned production maintained in the master schedule to support customer-order promising. [This] quantity is the uncommitted inventory balance in the first period and is normally calculated for each period in which an MPS receipt is scheduled. In the first period, [this] includes on-hand inventory less customer orders that are due and overdue. Three methods of calculation are used: discrete [...], cumulative [...] with look-ahead, and cumulative [...] without look-ahead. (2) In logistics, the quantity of a finished good that is or will be available to commit to a customer order based on the customer's required ship date. To accommodate deliveries on future dates, [this] is usually time-phased to include anticipated purchases or production receipts. See: discrete available-to-promise, cumulative available-to-promise.

A calculation based on the available-to-promise figure in the master schedule. For the first period, the ATP is the sum of the beginning inventory plus the MPS quantity minus backlog for all periods until the item is master scheduled again. For all other periods, if a quantity has been scheduled for that time period, then the ATP is this quantity minus all customer commitments for this and other periods until another quantity is scheduled in the MPS. For those periods where the quantity scheduled is zero, the ATP is zero (even if deliveries have been promised). The promised customer commitments are accumulated and shown in the period where the item was most recently scheduled. Syn: incremental available-to-promise. See: available-to-promise.

The quantity shown in the inventory records as being physically in stock.

Module 4 Section B: Using and Maintaining the Master Schedule	Module 4 Section B: Using and Maintaining the Master Schedule
Term Cumulative available-to-promise	Term Hedge
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Module 4 Section B: Using and Maintaining the Master Schedule	Module 4 Section B: Using and Maintaining the Master Schedule
Term Volume hedge	Term Product mix hedge
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Material requirements planning (MRP)	Term Bill of material (BOM)
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Item master record APICS CPIM Learning System © 2023	Term Parent item APICS CPIM Learning System © 2023

1) An action taken in an attempt to shield the company from an uncertain event such as a strike, price increase, or currency reevaluation. 2) In master scheduling, a scheduled quantity to protect against uncertainty in demand or supply. [This] is similar to safety stock, except that [this] has the dimension of timing as well as amount. [A volume or market type of this] is carried at the master schedule or production plan level. The master scheduler plans excess quantities over and above the demand quantities in given periods beyond some time fence such that, if [this] is not needed, it can be rolled forward before major resources must be committed to produce [it] and put it in inventory. [A product mix type of this] is an approach where several interrelated optional items are overplanned. Sometimes, using a planning bill, the sum of the percent mix can exceed 100 percent by a defined amount, thus triggering additional [planning for this term]. 3) In purchasing, any purchase or sale transaction having as its purpose the elimination of the negative aspects of price fluctuations. See: market hedge, option overplanning, planning bill of material, safety stock, time fence, two-level master.

A calculation based on the available-to-promise (ATP) figure in the master schedule. Two methods of computing [this] are used, with and without lookahead calculation. [With look-ahead, this] equals the ATP from the previous period plus the MPS of the period minus the backlog of the period minus the sum of the differences between the backlogs and MPSs of all future periods until, but not to include, the period where point production exceeds the backlogs. [Without look-ahead, this] equals the ATP from the previous period plus the MPS, minus the backlog in the period being considered. See: available-to-promise.

[An] approach where several interrelated optional items are overplanned. Sometimes, using a planning bill, the sum of the percent mix can exceed 100 percent by a defined amount, thus triggering additional hedge planning.

A [...] hedge [...] carried at the master schedule or production plan level. The master scheduler plans excess quantities over and above the demand quantities in given periods beyond some time fence such that, if the hedge is not needed, it can be rolled forward before major resources must be committed to produce the hedge and put it in inventory.

1) A listing of all the subassemblies, intermediates, parts, and raw materials that go into a parent assembly, showing the quantity of each required to make an assembly. It is used in conjunction with the master production schedule to determine the items for which purchase requisitions and production orders must be released. A variety of display formats [exist] for [this], including the single-level [...], indented [...], modular (planning) [...], transient [...], matrix [...], and costed[...]. 2) A list of all the materials needed by a contract manufacturer to make one production run of a product's piece parts/components for its customers. [It] may also be called the formula, recipe, or ingredients list in certain process industries.

A set of techniques that uses bill of material data, inventory data, and the master production schedule to calculate requirements for materials. It makes recommendations to release replenishment orders for material. Further, because it is time-phased, it makes recommendations to reschedule open orders when due dates and need dates are not in phase. [When] time-phased, [this concept] begins with the items listed on the MPS and determines (1) the quantity of all components and materials required to fabricate those items and (2) the date that the components and material are required. [Also when] time-phased, [this] is accomplished by exploding the bill of material, adjusting for inventory quantities on hand or on order, and offsetting the net requirements by the appropriate lead times.

The item produced from one or more components. Syn: parent.

The "master" [information] for an item. Typically, it contains identifying and descriptive data and control values (lead times, lot sizes, etc.) and may contain data on inventory status, requirements, planned orders, and costs. [It is] linked by bill-of-material records (or product structure records), thus defining the bill of material.

Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Single-level bill of material	Term Multilevel bill of material
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Indented bill of material	Term Summarized bill of material
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Phantom bill of material	Term Allocation
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Parts requisition	Term Firm planned order (FPO)
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A display of all the components directly or indirectly used in a parent, together with the quantity required of each component. If a component is a subassembly, blend, intermediate, etc., all its components and all their components also will be exhibited, down to purchased parts and raw materials.

A display of components that are directly used in a parent item. It shows only the relationships one level down.

A form of multilevel bill of material that lists all the parts and their quantities required in a given product structure. Unlike the indented bill of material, it does not list the levels of manufacture and lists a component only once for the total quantity used. A form of multilevel bill of material. It exhibits the highest-level parents closest to the left margin, and all the components going into these parents are shown indented toward the right. All subsequent levels of components are indented farther to the right. If a component is used in more than one parent within a given product structure, it will appear more than once, under every subassembly in which it is used.

1) The classification of resources or item quantities that have been assigned to specific orders but have not yet been released from the stockroom to production. It is an "uncashed" stockroom requisition. 2) A process used to distribute material in short supply. Syn: assignment. See: reservation.

A bill-of-material coding and structuring technique used primarily for transient (nonstocked) subassemblies. For the transient item, lead time is set to zero and the order quantity to lot-for-lot. [This term] represents an item that is physically built but rarely stocked before being used in the next step or level of manufacturing. This permits MRP logic to drive requirements straight through the phantom item to its components, although the MRP system usually retains its ability to net against any occasional inventories of the item. This technique also facilitates the use of common bills of material for engineering and manufacturing. Syn: blowthrough, transient bill of material. See: pseudo bill of material.

A planned order that can be frozen in quantity and time. The computer is not allowed to change it automatically; this is the responsibility of the planner in charge of the item that is being planned. This technique can aid planners working with MRP systems to respond to material and capacity problems by [solidifying] selected planned orders. In addition, [these] are the normal method of stating the master production schedule. See: planning time fence.

An authorization that identifies the item and quantity required to be withdrawn from an inventory. Syn: requisition. See: purchase requisition.

Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Action message	Term Rescheduling
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Bill-of-material explosion	Term Requirements explosion
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Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Explode	Term Lead-time offset
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section C: Material Requirements Planning	Module 4 Section C: Material Requirements Planning
Term Planned order receipt	Term Planned order release
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023

The process of changing order or operation due dates, usually as a result of their being out of phase with production or customer commitments.

An output of a system that identifies the need for, and the type of action to be taken to correct, a current or potential problem. Examples of [this] in an MRP system include release order, reschedule in, reschedule out, and cancel. Syn: exception message, action report.

The process of calculating the demand for the components of a parent item by multiplying the parent item requirements by the component usage quantity specified in the bill of material. Syn: explosion.

The process of determining component identities, quantities per assembly, and other parent-component relationship data for a parent item. Explosion may be single level, indented, or summarized.

A technique used in MRP where a planned order receipt in one time period requires the release of that order in an earlier time period based on the lead time for the item. Syn: component lead-time offset, offsetting.

To perform a bill-of-material explosion.

A row on an MRP table that is derived from planned order receipts by taking the planned receipt quantity and offsetting to the left by the appropriate lead time. See: order release.

The quantity planned to be received at a future date as a result of a planned order release. [These] differ from scheduled receipts in that they have not been released. Syn: planned receipt.

Module 4 Section C: Material Requirements Plan	ning	Module 4 Section C: Material Requirements Plan	nning
Term Gross requirement		Term Net requirements	
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Module 4 Section C: Material Requirements Plan	ning	Module 4 Section D: CRP and Scheduling	
Term Scheduled receipt		Term Capacity requirements planning (CR	P)
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Module 4 Section D: CRP and Scheduling		Module 4 Section D: CRP and Scheduling	
Term Gateway work center		Term Infinite loading	
APICS CPIM Learning System	© 2023	APICS CPIM Learning System	© 2023
Module 4 Section D: CRP and Scheduling		Module 4 Section D: CRP and Scheduling	
Term Finite loading		Term Time standard	
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[In MRP and for a part or an assembly, these] are derived as a result of applying gross requirements and allocations against inventory on hand, scheduled receipts, and safety stock. After being lot-sized and offset for lead time, net requirements become planned orders.

The total of independent and dependent demand for a component before the netting of on-hand inventory and scheduled receipts.

The function of establishing, measuring, and adjusting limits or levels of capacity. In this context, the term refers to the process of determining in detail the amount of labor and machine resources required to accomplish the tasks of production. Open shop orders and planned orders in the MRP system are input to CRP, which through the use of parts routings and time standards translates these orders into hours of work by work center by time period. Even though rough-cut capacity planning may indicate that sufficient capacity exists to execute the MPS, [this concept] may show that capacity is insufficient during specific time periods. See: capacity planning.

An open order that has an assigned due date. See: open order.

Calculation of the capacity required at work centers in the time periods required regardless of the capacity available to perform this work. Syn: infinite scheduling.

A work center that performs the first operation of a particular routing sequence.

The predetermined times allowed for the performance of a specific job. Often consist of two parts, one for machine setup and one for actual running. Can be developed through observation of the actual work (time study), summation of standard micromotion times (predetermined or synthetic [types of these]), or approximation (historical job times).

Assigning no more work to a work center than the work center can be expected to execute in a given time period. The specific term usually refers to a computer technique that involves calculating shop priority revisions in order to level load operation by operation. Syn: finite scheduling. See: drum-bufferrope.

Module 4 Section D: CRP and Scheduling	Module 4 Section D: CRP and Scheduling
Term Remedial maintenance	Term Final assembly schedule (FAS)
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Procurement	Term Purchasing
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Physical supply	Term Supplier
APICS CPIM Learning System © 2023	APICS CPIM Learning System © 2023
Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Responsible procurement	Term Landed cost
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A schedule of end items to finish the product for specific customers' orders in a make-to-order or assemble-to-order environment. It is also referred to as the finishing schedule because it may involve operations other than the final assembly; also, it may not involve assembly (e.g., final mixing, cutting, packaging). [This] is prepared after receipt of a customer order as constrained by the availability of material and capacity, and it schedules the operations required to complete the product from the level where it is stocked (or master scheduled) to the end-item level.

Unscheduled maintenance performed to return a product or process to a specified performance level after a failure or malfunction.

The term used in industry and management to denote the function of and the responsibility for procuring materials, supplies, and services.

The business functions [of...] planning, purchasing, inventory control, traffic, receiving, incoming inspection, and salvage operations.

- 1) Provider of goods or services. See: vendor.
- 2) Seller with whom the buyer does business, as opposed to vendor, which is a generic term referring to all sellers in the marketplace.

The movement and storage of goods from suppliers to manufacturing. [Its cost] is ultimately passed on to the customer.

This cost includes the product cost plus the costs of logistics, such as warehousing, transportation, and handling fees.

Assuring the use of ethical sources of goods and services where a firm does business to bring about a positive impact and minimize the negative impact on societies and environments—including reduce, reuse, and recycle of materials. Includes processes for identifying, assessing, and managing the environmental, social, and ethical risk in the supply chain. Syn: environmentally responsible purchasing.

Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Total cost of ownership (TCO)	Term Supplier relationship management (SRM)
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Value analysis	Term Request for quote (RFQ)
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Customer-supplier partnership	Term Sole-source supplier
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Single-source supplier	Term Multisourcing
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A comprehensive approach to managing an enterprise's interactions with the organizations that supply the goods and services the enterprise uses. The goal of [this] is to streamline and make more effective the processes between an enterprise and its suppliers. [It] is often associated with automating procure-to-pay business processes, evaluating supplier performance, and exchanging information with suppliers. An e-procurement system is often an example of [this type of] family of applications.

In supply chain management, [this] is the sum of all the costs associated with every activity of the supply stream. The main insight that [this] offers to the supply chain manager is the understanding that the acquisition cost is often a very small portion of [this concept].

A document used to solicit vendor responses when a product has been selected and price quotations are needed from several vendors. The systematic use of techniques that identify a required function, establish a value for that function, and finally provide that function at the lowest overall cost. Focuses on the functions of an item rather than the methods of producing the present product design.

The only supplier capable of meeting (usually technical) requirements for an item. See: single-source supplier.

A long-term relationship between a buyer and a supplier characterized by teamwork and mutual confidence. The supplier is considered an extension of the buyer's organization. The partnership is based on several commitments. The buyer provides long-term contracts and uses fewer suppliers. The supplier implements quality assurance processes so that incoming inspection can be minimized. The supplier also helps the buyer reduce costs and improve product and process designs. Syn: customer partnership. See: outpartnering.

Procurement of a good or service from more than one independent supplier. Syn: multiple sourcing. Ant: single sourcing. See: dual sourcing.

A company that is selected to have 100 percent of the business for a part although alternate suppliers are available. See: sole-source supplier.

Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Strategic sourcing	Term Tactical buying
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Virtual organization	Term Strategic alliance
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Strategic partnerships	Term Joint venture
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing
Term Concurrent engineering	Term Participative design/engineering
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The purchasing process focused on transactions and nonstrategic material buying. Closely aligned with the "ordering" portion of executing the purchasing transaction process. Its characteristics include stable, limited fluctuations; defined standard specifications noncritical to production; no delivery issues; and high reliability concerning quality-standard material with very little concern for rejects. See: strategic sourcing.

A comprehensive approach for locating and sourcing key material suppliers, which often includes the business process of analyzing total-spend-for-material spend categories. Includes a focus on the development of long-term relationships with trading partners who can help the purchaser meet profitability and customer satisfaction goals. From an information technology applications perspective, includes automation of requests for quote (RFQ), requests for proposal (RFP), electronic auctioning (e-auction or reverse auction), and contract management processes.

A relationship formed by two or more organizations that share information (proprietary), participate in joint investments, and develop linked and common processes to increase the performance of both companies. Many organizations form [these] to increase the performance of their common supply chain.

Short-term alliances between independent organizations in a potentially long-term relationship to design, produce, and distribute a product. Organizations cooperate based on mutual values and act as a single entity to third parties.

An agreement between two or more firms to risk equity capital to attempt a specific business objective.

Alliances with top supplier and buyer performers to enhance a firm's performance.

A concept that refers to the simultaneous participation of all the functional areas of the firm in the product design activity. Suppliers and customers are often also included. The intent is to enhance the design with the inputs of all the key stakeholders. Such a process should ensure that the final design meets all the needs of the stakeholders and should ensure a product that can be quickly brought to the marketplace while maximizing quality and minimizing costs. Syn: co-design, concurrent design, concurrent engineering, new product development team, parallel engineering, simultaneous design/engineering, simultaneous engineering, team design/ engineering. See: early manufacturing involvement.

Syn: participative design/engineering.

Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Cross-docking	Term Third-party logistics (3PL)	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Critical characteristics	Term Critical-to-quality characteristics (CTQs)	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term First pass yield	Term First-article inspection	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Average outgoing quality limit (AOQL)	Term Supplier audit	
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A buyer and supplier team with a third party that provides product delivery services. This third party may provide added supply chain expertise.

The concept of packing products on incoming shipments so they can be easily sorted at intermediate warehouses or for outgoing shipments based on final destination. The items are carried from the incoming vehicle docking point to the outgoing vehicle docking point without being stored in inventory at the warehouse. [It] reduces inventory investment and storage space requirements. Syn: direct loading.

The important and measurable traits of a product or process whose performance targets must be met to satisfy the customer. They adjust improvement efforts to meet consumer requirements. [They also] represent customer expectations for a product.

The attributes of a product that must function properly to avoid the failure of the product. Syn: functional requirements.

A quality check on the first component run after a new setup has been completed. Syn: first-piece inspection.

The ratio of products that conform to specifications without rework or modification to total input.

Auditing supplier processes as part of a supplier development system.

The maximum average outgoing quality over all possible levels of incoming quality for a given acceptance sampling plan and disposal specification.

Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Supplier certification	Term Certified supplier	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Lean metric	Term Terms and conditions	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Purchase requisition	Term Purchase order	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Reverse auction	Term Order processing	
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A status awarded to a supplier that consistently meets predetermined quality, cost, delivery, financial, and count objectives. Incoming inspection may not be required.

Certification procedures verifying that a supplier operates, maintains, improves, and documents effective procedures that relate to the customer's requirements. Such requirements can include cost, quality, delivery, flexibility, maintenance, safety, and ISO quality and environmental standards.

All the provisions and agreements of a contract.

A metric that permits a balanced evaluation and response—quality without sacrificing quantity objectives. The types of metrics are financial, behavioral, and core-process performance.

The purchaser's authorization used to formalize a purchase transaction with a supplier. [When given to a supplier, this] should contain statements of the name, part number, quantity, description, and price of the goods or services ordered; agreed-to terms as to payment, discounts, date of performance, and transportation; and all other agreements pertinent to the purchase and its execution by the supplier.

An authorization to the purchasing department to purchase specified materials in specified quantities within a specified time. See: parts requisition.

The activity required to administratively process a customer's order and make it ready for shipment or production.

An internet auction in which suppliers attempt to underbid their competitors. Company identities are known only by the buyer.

Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Vendor-managed inventory (VMI)	Term Consignment	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section E: Suppliers and Purchasing	
Term Continuous replenishment	Term Supplier measurement	
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Module 4 Section E: Suppliers and Purchasing	Module 4 Section F: Changes and Product Life Cycle Management	
Term Point-of-use delivery	Term Least total cost	
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APICS CPIM Learning System © 2023 Module 4 Section F: Changes and Product Life Cycle Management	Module 4 Section F: Changes and Product Life Cycle Management	
Module 4 Section F: Changes and	Module 4 Section F: Changes and	

- 1) A shipment that is handled by a common carrier.
- 2) The process of a supplier placing goods at a customer location without receiving payment until after the goods are used or sold. See: consigned stocks.

A means of optimizing supply chain performance in which the supplier has access to the customer's inventory data and is responsible for maintaining the inventory level required by the customer. Accomplished by a process in which resupply is performed by the vendor through regularly scheduled reviews of the on-site inventory. The on-site inventory is counted, damaged or outdated goods are removed, and the inventory is restocked to predefined levels. The vendor obtains a receipt for the restocked inventory and accordingly invoices the customer. See: continuous replenishment.

The act of measuring the supplier's performance to a contract. Measurements usually cover delivery reliability, lead time, and price. Syn: purchasing performance measurement. See: vendor measurement.

A process by which a supplier is notified daily of actual sales or warehouse shipments and commits to replenishing these sales (for example, by size or color) without stockouts and without receiving replenishment orders. The result is a lowering of associated costs and an improvement in inventory turnover. See: rapid replenishment, vendormanaged inventory.

A dynamic lot-sizing technique that calculates the order quantity by comparing the setup (or ordering) costs and the carrying cost for various lot sizes and selects the lot size where these costs are most nearly equal. See: discrete order quantity, dynamic lot sizing.

Direct delivery of material to a specified location on a plant floor near the operation in which it is to be used.

A mathematically complex, dynamic lot-sizing technique that evaluates all possible ways of ordering to cover net requirements in each period of the planning horizon to arrive at the theoretically optimum ordering strategy for the entire net requirements schedule. See: discrete order quantity, dynamic lot sizing.

A dynamic lot-sizing technique that uses the same logic as the least total cost method, but adds a routine called look ahead/look back. When the look ahead/look back feature is used, a lot quantity is calculated, and before it is firmed up, the next or the previous period's demands are evaluated to determine whether it would be economical to include them in the current lot. See: discrete order quantity, dynamic lot sizing.

Module 4		Module 4	
Section F: Changes and Product Life Cycle Management	<u>.</u>	Section F: Changes and Product Life Cycle Managemen	t
T		T	
Term		Term	
Safety lead time		End-of-life management	
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Planning for the phase-out of one product and the phase-in of a new product to avoid both the excessive inventory of and an out-of-stock situation with the old product before the replacement product is available.

An element of time added to normal lead time to protect against fluctuations in lead time so that an order can be completed before its real need date. When used, the MRP system, in offsetting for lead time, will plan both order release and order completion for earlier dates than it would otherwise. Syn: protection time, safety time.