

Cicerone® Certification Program

Certified Beer Server Syllabus

Updated ~~June 1st, 2013~~ July 1st, 2015

This syllabus outlines the knowledge required of those preparing for the Certified Beer Server exam **in the United States**. While this list is comprehensive in its scope of content, further study beyond the syllabus is necessary to fully understand each topic. The content tested on the Certified Beer Server exam is a subset of the information presented within the **Certified Master Cicerone® syllabus** and the **Master syllabus**, and individual syllabi for all **three tests** **four levels of the program** may be found on the cicerone.org website.

Outline

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- F. Serving bottled beer
- G. Serving draft beer

II. Beer Styles

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- B. Style parameters
- C. History, characteristics, and flavor attributes of styles by region

III. Beer Flavor and Evaluation

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- B. Identify normal flavors of beer and their source
- C. Off-flavor knowledge

IV. Beer Ingredients and Brewing Processes

- A. Ingredients

V. Pairing Beer with Food

Full Syllabus

I. Keeping and Serving Beer

- A. Purchasing and accepting beer
 1. The three-tier system in the United States and the reasons for its existence
 - a. By law, alcoholic beverages **sold in the United States** must **comply with** **move through** the three-tier system **in the United States**. The three tiers are Brewers/Importers, Wholesalers (also known as Distributors), and Retailers
 - i. Brewers and importers sell to wholesalers
 - ii. Wholesalers sell to both on- and off-premises retailers
 - iii. On- and off-premises retailers sell to consumers
 - b. Some states have granted exceptions to the three-tier system. Common exceptions include:
 - i. Brewpubs that both brew and retail to consumers
 - ii. Breweries that brew and sell directly to retailers or consumers
- B. Serving alcohol
 1. Alcohol's effects
 - a. Absorption and elimination
 - b. Physical and behavioral indicators
 2. Responsible serving practices
 - a. Provide accurate ABV information to consumers
 - b. Adjust serving size based on ABV
- C. Beer storage
 1. Beer is best consumed fresh
 - a. When beer is released from the brewery, it is ready to drink
 - b. A very few strong or intensely flavored beers may age in ways that make them interesting to drink months or years later if properly cellared
 2. Freshness can be preserved and enhanced by wholesaler and retailer actions
 - a. Rotate inventory
 - i. Ensure that beer is consumed in the order of dating
 - ii. Remove out of date products from service inventory
 - iii. When beers lack an expiration date:
 - Non-pasteurized draft beer about 45-60 days (refrigerated)
 - Pasteurized draft beer about 90-120 days (refrigerated)
 - Bottled beer:
 - If kept refrigerated, can be good for up to six months
 - When not refrigerated or if subjected to other stresses, may be noticeably off after three months
 - Taste aged product against fresh product to determine deterioration
 - iv. Train staff to encourage/sell/promote all beers offered
 - b. Store beer properly
 - i. Refrigerated storage is best for all beers at all times. Required for draft beer and many craft beers
 - ii. Non-refrigerated storage accelerates aging and development of ~~off-flavor~~ off flavors
 - With time, all beers will develop signs of oxidation (papery, wet cardboard flavors)
 - iii. Bottled beers are subject to skunking

- Caused by sunlight and fluorescent light
 - Most noticeable in the aroma of the beer
 - Brown glass blocks 98% of the **skunking wavelengths of light that cause skunking**, and therefore ~~provides the best protection of any bottles~~ superior protection to clean and green glass
 - Green glass bottles block 20% of the **skunking wavelengths that cause skunking**. Skunking may be evident after a few minutes of exposure
 - Clear glass offers no protection against skunking. ~~Development of skunky flavor occurs in minutes~~
 - Skunking may be evident after a few minutes of light exposure
 - Cans, ceramic bottles, and bottles in closed case boxes that completely shield beer from light give maximum protection from skunking
- c. Serve beer properly
- i. ~~Draught~~ Draft beer must be served using CO₂ or a CO₂-nitrogen mix at the proper pressure setting.
 - ii. Compressed air should never be used instead of CO₂ or a CO₂-nitrogen mix in a draft dispense system
 - iii. A party pump limits the flavor stability of the beer to **less than one day** because oxygen is put in contact with the beer
- D. Draft Systems
1. Key elements
 - a. Keg
 - b. Coupler
 - c. FOB (Foam-on-beer) detector
 - d. Faucet
 2. Draft system operation
 - a. Standard temperature of 38 °F
 - b. All kegs should be in the cooler for 24 hours prior to service to prevent foaming
 - c. Gas pressure applied to keg should only be set or adjusted by a draft-trained professional
 3. Basic troubleshooting **items**
 - a. Beer has been in cooler for 24 hours
 - b. Coupler is properly engaged
 - c. No kinks or pinches in hose from coupler to wall
 - d. FOB, if present, properly set for service
 - e. If beer is still pouring badly, contact a draft-trained professional for assistance
 4. Draft system maintenance
 - a. Draft systems need to be cleaned to prevent development of ~~off-flavors~~ off flavors in beer and to ensure proper operation of the draft system
 - b. Cleaning required every 14 days
 - c. Due to hazardous nature of cleaning solutions, never attempt to pour beer prior to full completion of draft system cleaning
- E. Beer glassware
1. Select appropriate glassware
 - a. Size
 - i. Based on style and alcohol content (stronger beers, smaller glass)
 - ii. Provide room for an appropriately sized head

- b. Shape
 - i. Cultural and historical traditions connect certain glasses to specific styles
 - c. Brand
 - i. Branded glasses matched to beer
2. Use beer clean glassware
- a. Glass cleaning procedure
 - i. Empty glass into open drain
 - ii. Wash with non-petroleum based (sudsless) soap and brush
 - iii. Rinse in cold water, heel in, heel out
 - iv. Rinse in sanitizer heel in, heel out
 - v. Dry inverted on rack so air circulates inside
 - vi. Rinse with cold water immediately before dispense
 - b. Checking glass for “beer clean”
 - i. Without beer
 - Sheeting (~~Wet~~ ~~wet~~ glass, empty, hold up to light and inspect for even sheeting. Fwater should sheet off of glass evenly; formation of droplets or webbing indicates not beer clean)
 - Salt test (~~Wet~~ ~~wet~~ glass, sprinkle salt throughout, places where salt does not adhere are not beer clean)
 - ii. With beer
 - Head size, shape, retention
 - Bubbles clinging to sides of glass (in liquid beer) indicate ~~not~~ **not** beer clean
 - Upon During consumption, lacing indicates beer clean glass lace will cling to the side of a beer clean glass following each sip
 - c. Preparation to serve
 - i. Glass temperature
 - Room temperature and chilled glasses are acceptable
 - Frozen/frosted glasses are not recommended: causes foaming, makes beer too cold, frozen water or sanitizer may be present
 - ii. Cold water rinse of glass before filling
 - Removes residual sanitizer
 - Cools glasses that may be warm from washing
 - Aids ideal head formation and retention
- F. Serving bottled beer
1. Prepare for service
 - a. Bottle-conditioned beer should be stored upright prior to service
 - b. ~~When possible, beers may be stored at different temperatures based on style~~ If possible, store beer at ideal serving temperature as dictated by style, otherwise store all beer under refrigeration (43 °F or less)
 2. Examine bottle
 - a. Look for white flakes (snow-like) which can indicate old, unstable beer. Do not serve beer in this condition
 - b. Look for a thin ring of gunk at liquid level in neck—generally indicative of a bad bottle if present. Do not serve beer in this condition
 - c. Check for yeast on bottom of bottle
 - i. Retain yeast in bottle unless:
 - Consumer requests yeast to be poured
 - Style (e.g. Hefeweizen Weissbier) is traditionally poured with yeast

- b. On common American and import Sankey kegs: grip keg coupler handle, pull out and raise to the “up” or “off” position to disengage. Turn the coupler a quarter turn (90 degrees) counterclockwise to unseat. Lift off of the keg
- c. Seat the coupler on a new keg. Turn clockwise a quarter turn (90 degrees) to engage then lower the coupler handle to the “down” or “on” position
- d. In long-draw systems that use them, the foam-on-beer (FOB) detector for the keg needs to be reset after a keg change. This is usually done by venting the FOB mechanism to release foam and gas from the chamber

II. Beer Styles

- A. Understanding beer styles
 1. The historical development of beer styles
 - a. First driven by available ingredients, equipment, and water
 - b. Shaped by technology, taxes and regulations, culture, consumer appeal, etc.
- B. Style parameters
 1. Knowledge requirements
 - a. For each style listed in the syllabus candidates should possess:
 - i. Qualitative knowledge of perceived bitterness using the following descriptors: low, moderate, pronounced, assertive, or highly assertive¹
 - ii. Qualitative knowledge of color using the following descriptors: straw, gold, amber, brown, or black
 - iii. Qualitative knowledge of alcohol content using the following descriptors²: lower, normal, elevated, high, or very high³
 2. Quantitative parameters of beer character
 - a. Alcohol content
 - i. By volume
 - ii. By weight
 - b. International Bitterness Units
 - c. SRM Color
 3. Qualitative parameters of beer character
 - a. Aroma
 - b. Flavor
 - c. Aftertaste
 - d. Mouthfeel
 - e. Perceived bitterness
 - f. Appearance
- C. History, characteristics, and flavor attributes of styles by region⁴
 1. 3. German/Czech styles Germany, Czech Republic, and Austria
 - a. Lagers
 - i. Pale

¹ Test questions will reference IBUs as cataloged by the 2015 BJCP guidelines in addition to perceived bitterness levels as presented in the Certified Beer Server Syllabus

² Alcohol level descriptors correspond to the following ABV ranges: Lower – <4.4%4.5%; Normal – 4.4%5.9%4.5-6.0%; Elevated – 6.0%7.4%6.1-7.5%; High – 7.5%9.9%7.6-10.0%; Very high – >10.0%

³ Test questions will reference ABV values as cataloged by the 2015 BJCP guidelines in addition to alcohol level descriptors as presented in the Certified Beer Server Syllabus

⁴ Key for style descriptors: PB – Perceived Bitterness; C – Color; ABV – Alcohol level

- German Pilsner (PB – Assertive; C – Straw to light gold; ABV – Normal)
- Munich Helles (PB – Moderate; C – Straw to light gold; ABV – Normal)
- Bohemian Pilsner/Czech Premium Pale Lager (PB – Pronounced; C – Gold; ABV – Normal to normal)
- ii. Amber, dark, or strong Amber or dark
 - Oktoberfest Märzen (PB – Moderate; C – Gold to amber; ABV – Normal to elevated)
 - Munich Dunkel (PB – Moderate; C – Amber to brown; ABV – Normal)
 - Maibock (PB – Moderate; C – Gold to light amber; ABV – Elevated) [NOTE: Renamed “Helles Bock” and moved down to Bocks]
 - Doppelbock (PB – Low; C – Gold to brown; ABV – High) [NOTE: Moved down to Bocks]
- iii. Bocks
 - Maibock/Helles Bock (PB – Moderate; C – Gold to light amber; ABV – Elevated)
 - Doppelbock (PB – Low; C – Gold to brown; ABV – Elevated to high)
- b. Ales
 - i. Wheat/Rye/rye beers
 - Hefeweizen/Weizen/Weissbier (PB – Low; C – Light gold to light amber; ABV – Normal)
 - Berliner Weisse (PB – Low; C – Straw; ABV – Lower)
 - Gose (PB – Low; C – Straw to light gold; ABV – Lower to normal)
 - ii. Rhine Valley ales
 - Kölsch (PB – Moderate; C – Straw to light gold; ABV – Normal)
- 2. 1. Belgian/French styles Belgium and France
 - a. c. Trappist and Abbey Ales/abbey ales
 - i. Double/Dubbel/Belgian Dubbel (PB – Low; C – Amber to brown; ABV – Elevated)
 - ii. Triple/Tripel/Belgian Tripel (PB – Moderate; C – Gold; ABV – High)
 - b. a. Spontaneously fermented beers/Lambic beers
 - i. Gueuze (PB – Low; C – Gold; ABV – Normal to elevated)
 - ii. Kriek, Framboise and other fruit lambics/Fruit Lambic (Kriek, Framboise, etc.) (PB – Low; C – Varies with fruit; ABV – Normal to elevated)
 - c. b. Flanders ales
 - i. Red Flanders Red Ale (PB – Low; C – Red-Brown; ABV – Normal to elevated)
 - d. e. Farmhouse beers/Unique beers
 - i. Saison (PB – Moderate; C – Gold to light amber; ABV – Normal to elevated)
 - ii. Witbier/White (PB – Low; C – Straw to light gold, made white by haze; ABV – Normal)
 - e. d. Other Belgian beer/Pale Belgian beers
 - i. Belgian Blond Ale (PB – Low; C – Gold; ABV – Elevated)
 - ii. Belgian Golden Strong Ale (PB – Moderate; C – Gold; ABV – High to very high)

3. 2. British styles Britain and Ireland

a. English ales England

- i. Pale ales:
 - Special/Best/Premium Bitter Best Bitter (PB – Pronounced; C – Gold to amber; ABV – Lower to normal)
 - English IPA (PB – Assertive; C – Gold to amber; ABV – Elevated Normal to elevated)
- ii. Dark ales
 - Mild (PB – Low; C – Amber to brown; ABV – Lower)
 - Northern English Brown Ale British Brown Ale (PB – Moderate; C – Amber to brown; ABV – Normal Lower to normal)
 - Robust Porter (PB – Pronounced; C – Brown to black; ABV – Normal to elevated)
 - Sweet/Milk Stout Sweet Stout (PB – Moderate Low to moderate; C – Black Dark brown to black; ABV – Normal Lower to normal)
 - Oatmeal Stout (PB – Moderate; C – Brown Brown to black; ABV – Normal Lower to normal) [NOTE: moved from “American styles”]

b. Scottish ales Scotland

- i. Scottish ale (PB – Low to moderate; C – Light amber to dark amber; ABV – Lower to normal)
- ii. Strong Scotch Ale/Wee Heavy (PB – Low; C – Amber to brown; ABV – Elevated to high)

c. Irish ales Ireland

- i. Dry/Irish Stout (PB – Assertive Pronounced; C – Black Brown to black; ABV – Lower to normal)

4. American styles United States

a. Pale lagers

- i. American Light Lager (PB – Low; C Straw; ABV – Lower) [NOTE: was called “American Lager (Light, Standard, Premium)” under “Historic”]

b. Pale ales

- i. American Wheat Beer (PB – Moderate; C – Straw to gold; ABV – Normal Lower to normal) [NOTE: was under “Modern”]
- ii. American Blonde Ale (PB – Moderate; C – Straw to gold; ABV – Lower to normal) [NOTE: was under “Modern”]
- iii. American Pale Ale (PB – Pronounced; C – Gold to Amber Light gold to light amber; ABV – Normal) [NOTE: was under “Modern”]
- iv. American Amber Ale American Red Ale (PB – Pronounced; C – Amber Light amber to dark amber; ABV – Normal) [NOTE: was under “Modern”]

c. IPAs

- i. American IPA (PB – Assertive; C – Gold to dark amber amber; ABV – Elevated Normal to elevated) [NOTE: was called “American India Pale Ale (IPA)” under “Modern”]
- ii. Double IPA (PB – Highly assertive; C – Dark gold Gold to dark amber; ABV – High) [NOTE: was called “Imperial IPA” under “Modern”]

d. Dark ales

- i. American Brown Ale (PB – Moderate; C – Light brown to Dark brown Dark amber to black; ABV – Normal) [NOTE: was under “Modern”]
- ii. American Porter (PB – Pronounced; C – Brown to black; ABV – Normal to elevated)

- iii. ~~American Stout (PB – Assertive; C – Black; ABV – Normal to elevated)~~ [NOTE: was under “Modern”]
- iv. ~~Imperial Stout (PB – Pronounced; C – Black; ABV – High to very high)~~ [NOTE: was under “Modern”]
- e. ~~Strong ales~~
 - i. ~~American Barleywine (PB – Assertive; C – Light amber to light brown; ABV – High to very high)~~
- f. ~~f. [NOTE: was a.] Historical styles~~
 - i. ~~American Lager (Light, Standard, Premium) (PB – Low; C – Straw, very pale; ABV – Lower to Normal)~~ [NOTE: reorganized under “pale lagers”]
 - ii. ~~i. California Common-Beer (PB – Pronounced; C – Light amber to dark amber; ABV – Normal)~~
- g. ~~[NOTE was b.] Modern~~
 - i. ~~American Wheat Beer (PB – Moderate; C – Straw to gold; ABV – Normal)~~ [NOTE: reorganized under “pale ales”]
 - ii. ~~American Blonde Ale (PB – Moderate; C – Straw to gold; ABV – Lower to normal)~~ [NOTE: reorganized under “pale ales”]
 - iii. ~~American Pale Ale (PB – Pronounced; C – Gold to amber; ABV – Normal)~~ [NOTE: reorganized under “pale ales”]
 - iv. ~~American Amber Ale (PB – Pronounced; C – Amber to dark amber; ABV – Normal)~~ [NOTE: reorganized under “pale ales”]
 - v. ~~American India Pale Ale (IPA) (PB – Assertive; C – Gold to dark amber; ABV – Elevated)~~ [NOTE: reorganized under “IPAs”]
 - vi. ~~Imperial IPA (PB – Highly assertive; C – Dark gold to dark amber; ABV – High)~~ [NOTE: renamed and reorganized under “IPAs”]
 - vii. ~~American Brown Ale (PB – Moderate; C – Light brown to dark brown; ABV – Normal)~~ [NOTE: reorganized under “dark ales”]
 - viii. ~~American Stout (PB – Assertive; C – Black; ABV – Normal to elevated)~~ [NOTE: reorganized under “dark ales”]
 - ix. ~~Oatmeal Stout (PB – Moderate; C – Black; ABV – Normal)~~ [NOTE: moved to “England”]
 - x. ~~American Barleywine (PB – Assertive; C – Light amber to light brown; ABV – High to very high)~~ [NOTE: reorganized under “strong ales”]
 - xi. ~~Imperial Stout (PB – Pronounced; C – Black; ABV – High to very high)~~ [NOTE: reorganized under “dark ales”]

III. Beer Flavor and Evaluation

- A. Taste and flavor
 - 1. How we perceive flavor
 - a. Aroma
 - b. Taste
 - i. Established
 - Sweet
 - Salty
 - Sour/Acid
 - Bitter
 - Umami
 - ii. Emerging
 - Fat

- Carbonation
- Metallic
- c. Mouthfeel
 - i. Body
 - ii. Carbonation
- 2. Beer evaluation
 - a. Components of evaluation
 - i. Appearance
 - ii. Aroma
 - iii. Taste
 - iv. Mouthfeel
 - v. Aftertaste
 - b. Key evaluation techniques
 - i. ~~Short, quick sniffs to assess aroma~~ Aroma techniques
 - Distant Sniff: Swirl beer while holding glass six to eight inches away from nose and take one to two short sniffs
 - Short Sniff: Swirl beer; bring glass to nose and take one to two short sniffs
 - Long Sniff: Swirl beer; bring glass to nose and take one long sniff
 - Covered Sniff: Cover glass with hand; swirl beer for three to five seconds; bring glass to nose, remove hand, and sniff
 - ii. Use consistent background to assess color and clarity
 - iii. Beer should reach all parts of tongue during tasting
 - iv. Flavor perception continues after swallowing
- B. Identify normal flavors of beer and their source
 - 1. Malt and grain flavors
 - a. Pale beer: Uncooked flour, bread dough
 - b. Golden beer: White bread, wheat bread, water cracker
 - c. Light amber beer: Bread crust, biscuit, graham cracker
 - d. Amber beer: Toast, caramel, ~~pie crust~~ pie crust
 - e. Brown beer: Nutty, toffee, chocolate, dark/dried fruit
 - f. Black beer: Roast, burnt, coffee
 - 2. Hops
 - a. Bitterness, flavor and aroma effects
 - b. Traditional regional hop traits
 - i. American: Piney, citrus, resin, tropical fruit, catty
 - ii. English: Earthy, herbal, woody
 - iii. German/Czech: Floral, perfumy, peppery, minty, woody
 - 3. ~~Yeast~~ Fermentation flavors
 - a. Ale versus lager flavors (See Ingredients section IV.A.3.a)
 - b. Weizen yeast flavor
 - c. Other yeast and bacteria can contribute to beer flavor
- C. Off-flavor knowledge
 - 1. Oxidation
 - a. Papery/~~Wet~~ wet cardboard
 - b. Waxy/~~Lipstick~~ lipstick
 - 2. ~~Skunky/Lightstruck~~ Lightstruck/skunky
 - 3. Dirty draft lines
 - a. Buttery
 - b. Vinegar

IV. Beer Ingredients and Brewing Processes

- A. Ingredients
 1. Grains
 - a. Malt
 - i. Malt is produced by sprouting and drying cereal grain, such as barley or wheat
 - ii. Different shades and flavors of malt are produced by variations in kilning
 - b. Unmalted grains such as corn or rice are sometimes used
 2. Hops
 - a. Hop character in beer
 - i. Depending on use, hops can contribute bitterness, flavor, and/or aroma
 - ii. Aroma and flavor vary with variety
 - b. Basic anatomy of hop plant and cone
 - c. Major growing regions
 - i. Germany
 - ii. Czech Republic
 - iii. Britain
 - iv. United States
 - Yakima Valley, Washington
 - Oregon, Idaho
 - v. Australia and New Zealand
 3. Yeast
 - a. Taxonomy
 - i. Ale yeast
 - ~~Saccharomyces cerevisiae~~ *Saccharomyces cerevisiae*
 - Generally produce esters in levels which give fruity flavors to finished beers.
 - Some possess a phenolic off-flavor gene (POF+) which results in production of phenolic flavors such as clove, nutmeg, white pepper
 - ii. Lager yeast
 - ~~Saccharomyces pastorianus~~ *Saccharomyces pastorianus* also known as ~~Saccharomyces carlsbergensis~~ *Saccharomyces carlsbergensis*
 - Generally do not produce esters or phenols in appreciable quantities, resulting in a focus on malt and hop character
 - b. Other yeast and bacteria can contribute to beer flavor
 4. Water
 - a. Water makes up 90+% of the weight of beer:
 - b. All water contains traces of minerals
 - i. Many are essential to beer production
 - ii. Several have desirable flavor impact
 - c. Modern brewers adjust water chemistry to fit the requirements of the beer they brew

V. Pairing Beer with Food

No single model perfectly explains all the dynamics of beer and food pairing. Candidates at this level should understand that beer and food work well together, but do not need to possess knowledge of specific beer and food interactions.