



LEVEL: FOUNDATION

OVERVIEW: DESIGNED TO INTRODUCE CORE BARISTA SKILLS TO PEOPLE WITH NO PREVIOUS BARISTA EXPERIENCE. SUCCESSFUL CANDIDATES SHOULD BE ABLE TO SIMPLY CALIBRATE THEIR GRINDERS AND MAKE AN ESPRESSO AND CAPPUCCINO TO CORE STANDARDS. COURSE LENGTH IS ESTIMATED AT 1/2 - 1 DAY.

Introduction to Coffee is a recommended (but not mandatory) pre-requisite module. All knowledge and skill from these modules will be assumed as being held and may be tested through the practical and/or written assessments.

1.01 COFFEE BEANS	1.01.01	Understanding of the key flavours differences between Arabica & Robusta.	Recognises Arabica from Robusta in blind tasting (as tested in Introduction to Coffee Module).
	1.01.02	Understanding of the importance using fresh coffee beans and how to keep them fresh.	Uses a sealed bag, ideally within one month after roasting; maximum 3 months. Uses beans immediately after grinding. Minimises time in the hopper. Keeps lids on the bean hopper and doser chamber.
	1.01.03	Understanding of how to store coffee to minimize deterioration.	Stores beans away from air, moisture, light and temperature extremes at all times.
1.02 WORKSPACE MANAGEMENT	1.02.01	Understanding of the importance of maintaining a hygienic and organised workspace.	Always keeps workspace clean, tidy and organised.
1.03 GRINDING, DOSING AND TAMPING	1.03.1	Identification and naming of parts of main parts of a grinder.	Uses correct terminology: bean hopper, grind adjustment, dosing chamber and dosing lever (if applicable), dose adjustment, hopper gate.
	1.03.2	Basic understanding of how dose affects shot times (Too small/underdosed leads to faster shot times and too large/overdosed leads to slower shot times.).	Recognises when the dose is incorrect (too small or too large).
	1.03.3	Demonstration of good dosing technique – to keep dose consistent from one espresso to the next.	Uses the correct dosing action – to dose consistently with minimal spillage.
	1.03.4	Demonstration of dose calibration – using either a grinder with a dosing chamber OR "on demand" grinder. (traditionally 7grams for a single and 14 grams for a double; but now commonly 'updosed') Aiming for an extraction time of 20-30 seconds.	Adjusts volumetric OR time-based dose controls to produce an espresso within 20-30 seconds.
	1.03.5	Demonstration of initial grind calibration – using a grinder with a dosing chamber OR an 'on-demand' grinder.	Calibrates grind within 15 minutes to produce and espresso in 20-30 seconds – with a subsequent minor adjustment (as requested), made within 10 minutes.
	1.03.6	Basic understanding of how the grind affects shot times (given that the dose has already been calibrated and dosing is consistent).	Recognises when the grind is incorrect (too coarse or too fine) and corrects it to produce an espresso in 20-30 seconds.
	1.03.7	Understanding of when micro-adjustments to the grind are needed.	Makes micro-adjustments to the grind due to environmental conditions (temperature of grinder and surroundings, humidity levels, condition of the burrs, freshness of beans etc.).
	1.03.8	Demonstration of good technique for evenly distributing the dose in preparation for tamping.	Techniques for evenly distributing ground coffee over the filter is evidenced.
	1.03.9	Demonstration of good tamping technique using a hand tamp.	Holds tamp correctly to produce a flat and even surface on the tamped cake – and to reduce repetitive strain injuries.



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1.04 EXTRACTION & BREWING	1.04.1	Identification and naming of main parts of an espresso machine. Understanding of how to turn the espresso machine on and prepare it for use.	Uses correct terminology: group head, group handle, filter basket, shower, seal, steam wand, steam nozzle on-off controls (steam, extraction, hot water), gauges (pressure, temperature, water level), drip tray, cup warmer. Checks that boiler pressure is up to 1 bar before use. Warms group handles and seasons groups Stacks cups on cup warmer; stacks saucers and spoons etc. next to the espresso machine.
	1.04.2	Demonstration of steps for preparing espresso.	Dry wipes filter basket before dosing. Has acceptable spillage/waste when dosing and grinding. Uses consistent and effective dosing, distribution and tamping (consistent dosing, well distributed to avoid channeling, flat tamp without tapping filter). Cleans rim of filter before inserting. Flushes group head before attaching portafilter. Immediately brews when portafilter inserted.
	1.04.3	Understanding of basic sensory qualities of under-extracted espresso (thin body, unbalanced flavour with high acidity, poor crema), over-extracted espresso (unbalanced flavour with high bitterness, poor crema) and a good espresso (good body round and smooth, well balanced flavour (acidity, sweetness, bitterness), good visual crema (in line with coffee used) (It is expected that students will control this by aiming extraction time at 20-30 seconds, at this level)	Recognises differences between under-extraction, over-extraction and good extraction.
	1.04.4	Demonstration of good technique for making a micro-adjustment to the grind to improve the quality of poorly extracted espresso – aiming for an extraction time of 20-30 seconds, at this stage.	Extracts espresso in 20 - 30 seconds. Visual look of the espresso is consistent to desired standards.
1.05 MILK TECHNIQUES	1.05.1	Understanding of the importance of freshness of milk.	Uses fresh milk to maintain foam quality. Discards older or "off" milk.
	1.05.2	Understanding of why it is important to use milk hygienically.	Minimises time milk is left out of the refrigerator, rotate stock, empties and cleans jug before use, and milk is never re-foamed.
	1.05.3	Demonstration of techniques required to produce correct milk texture (micro-foam).	Produces milk with consistently dense texture, with no visible bubbles and a shiny surface. (See CDS Foam Quality Guide).
	1.05.4	Demonstration of good techniques for producing the correct milk temperature.	Desirable range 55c-65c (Maximum temperature 70c, Minimum of 50c).
	1.05.5	Demonstration of efficient steps when foaming milk.	Empty and clean jug before use Purges steam wand before foaming Wipes steam wand after use Purges steam wand after wiping Minimise milk waste.
	1.05.6	Understands the pouring techniques required to produce a cappuccino and caffe latte.	Can pour drinks to the required composition and visual requirements.



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1.06 BARISTA MENU	1.06.1	Demonstration of good techniques for preparing and serving an espresso.	Prepares an espresso to the desired size, taste and visual parameters (as per CDS drink definitions) .
		Demonstration of good techniques for preparing and serving a cappuccino	Prepares a cappuccino to the desired size, taste and visual parameters (as per CDS drink definitions)
1.07 HYGIENE, HEALTH & SAFETY	1.07.1	Basic understanding of the local laws that apply to safety and hygiene when using espresso equipment and cleaning chemicals.	Minimises risks related to safety and hygiene according to local laws. (cleans outside of steam wand – every time immediately after use).
	1.07.2	Demonstration of safe and hygienic work practices when preparing and serving espresso beverages	Washes hands and rinses wipes regularly. (purges inside of steam wand – every time immediately after use). Keeps body and clothing (including apron) clean and hygienic. Uses and cleans machines safely – according to manufacturer's instructions and local laws. Uses cleaning chemicals safely – according to manufacturer's instructions and local laws. Serves drinks safely and hygienically (Avoiding handling lip of the cup; aware of dangers of hot liquids/spillages)
1.08 CUSTOMER SERVICE	1.08.1	Not required at this level.	(has acceptable milk waste after pouring).
1.09 CLEANING, MAINTENANCE & TROUBLE- SHOOTING	1.09.1	Understanding of the importance of regular (at least daily) cleaning of the grinder and espresso machine Understanding of the importance of keeping the steam wand clean	Cleans the grinder and espresso machine as required. Purges the steam wand before each use and cleans it after each use.
	1.09.2	Demonstration of good techniques for daily cleaning of a grinder	Washes and dries the bean hopper. Empties the doser chamber and brushes out all excess ground coffee beans thoroughly. Wipes splashes and spills on outside of grinder.
	1.09.3	Demonstration of good techniques for daily cleaning of an espresso machine	Back flushes the espresso machine at least once a day. Brushes and cleans group heads of all excess coffee beans and oils. Flushes and cleans steam wands (never soaks them). Removes and cleans drip tray. Wipes splashes and spills on outside of espresso machine.
1.10 FINANCIAL MANAGEMENT	1.10.1	Not required at this level	



LEVEL: INTERMEDIATE

OVERVIEW: DESIGNED TO TEST KEY CORE AND MORE ADVANCED SKILLS AND UNDERSTANDING, EXPECTED FROM A COMPETENT BARISTA (FOR EXAMPLE, FROM SOMONE WORKING AS A BARISTA FOR 6 MONTHS OR MORE). SUCCESSFUL CANDIDATES SHOULD BE ABLE TO DIAL IN A BREW RECIPE, MAKE A FULL RANGE OF DRINKS WITH QUALITY AND SPEED, AS WELL AS UNDERSTAND THE BASIC REQUIREMENTS FOR CUSTOMER SERVICE AND MAINTENANCE. COURSE LENGTH IS ESTIMATED AT 1 - 2 DAYS.

Introduction to Coffee and Barista Foundation are recommended (but not mandatory) pre-requisite modules. All knowledge and skill from these modules will be assumed as being held and may be tested through the practical and/or written assessments.

BLOOMS TAXONOMY: Understanding / Applying / Analyzing

Recommended reading:

2.01 COFFEE BEANS	2.01.1	Understanding of the components of blend/single origin being used.	Identifies varieties and origins of blend used and links to flavour/body expected.
	2.01.2	Understanding of different species/sub-varieties and possible impacts on flavour.	Can name at least 2 Arabica sub varieties.
	2.01.3	Understanding of different geographic origins and possible impact on flavour.	Identifies geographic origins from three distinct coffees from different continents.
	2.01.4	Awareness of different processing methods (washed/natural/pulp natural) and how this affects flavour.	Knows how the processing methods affect coffee flavour and body. Distinguishes washed process from natural process by taste (ideally from the same farm/region).
	2.01.5	Awareness of the degassing period of fresh coffee and how this affects coffee performance/flavour.	Identifies coffee that is still degassing by its performance and flavor.
2.02 WORKSPACE MANAGEMENT	2.02.1	Analysis of the layout of key equipment, accessories and ingredients – to promote speed and efficiency.	Places all equipment and accessories in appropriate positions – to minimise travel, twisting and turning.
	2.02.2	Analysis of the layout of key equipment, accessories and ingredients – to achieve smooth workflow (starting from the grinder, moving to the espresso machine and refrigerator and ending at the customer service counter).	Places all equipment and accessories in appropriate positions – to achieve smooth workflow.
2.03 GRINDING, DOSING AND TAMPING	2.03.1	Analysis of advantages and disadvantages 'on-demand' dosing – compared with tradition dosing from a dosing chamber (in particular, advantages related to freshness, distribution of the dose, consistency with both single and double doses, ease of adjustment, and that a grinder with a dosing chamber has advantages related to familiarity and price).	Explains advantages and disadvantages of on-demand grinding.
	2.03.2	Demonstration of setting the dose and grind – using a grinder with a dosing chamber AND an 'on-demand' grinder.	Calibrates grind and dose (on both styles of grinder) within 15 minutes to produce an espresso to the required brew recipe.
	2.03.3	Analysis of how increasing or decreasing the dose affects body and flavour.	Increases dose to make more solids available which may improve body, depending on how the coffee is extraction. Decreasing the dose may have the opposite effect.
	2.03.4	Demonstration of how to make micro-adjustment to the grind.	Makes micro-adjustments to the grind quickly and confidently.
	2.03.5	Understanding of the effect of heat generated by the grinder itself or other climatic and environmental conditions.	Can describe and predict changes to the coffee due to heat issues as well as predict required changes to grind size.



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	2.03.6	Demonstration of consistently good techniques for evenly distributing the dose in preparation for tamping.	Holds tamp correctly to consistently produce a flat and even surface on the tamped cake – and to reduce repetitive strain injuries.
	2.03.7	Analysis of causes of channeling (uneven distribution of the dose, tamping on a slant, banging group handle after tamping, using a clogged for poorly made filter basket).	Identifies and corrects causes of channeling.
2.04 EXTRACTION & BREWING	2.04.1	Basic understanding of how to produce a balanced espresso and how to correct imbalance.	Identifies heightened acidity of under-extraction, and heightened bitterness of over-extraction, and the balance with sweetness achieved with a good extraction. Can describe how to corrects imbalance by use of changes in dose quantity, grind texture, water temperature and water quantity. (Balance may be assessed by discussions with candidate on the taste of the espresso or by measurement of extraction percentage).
	2.04.2	Understanding of how flavour compounds do not dissolve uniformly, and different flavours extract at different times.	Identifies (by taste and appearance) the production order of an espresso split into 3 parts.
	2.04.3	Understanding of how different shot lengths may affect extraction and body.	Can describe differences in flavour and body for 1.2 (50% EBF) and 1.4 (25% EBF) ratio shot (grams of ground coffee: grams of water)
	2.04.4	Analysis of how different shot times may cause under-extraction and over-extraction and resulting changes in flavor.	Identifies and describes difference in flavour and body between a 15-20 second shot and a 25-30 second shot.
2.05 MILK TECHNIQUES	2.05.1	Understanding of composition of milk and role each component (mainly protein and fat) plays in foaming ability, quality and stability of foam.	Knows the function of protein and the effect of different fat content. Can recognise the required quality of foam in line with CDS Foam Quality Guide
	2.05.2	Understanding of how different milk alternatives foam differently.	Foams milk alternatives (e.g. soy milk) to achieve the right texture and temperature and is aware of the limitations of some alternatives to be able to foam (e.g. rice milk).
	2.05.3	Understanding of reasons why milk may not foam successfully (age of milk, milk is not cold enough, deterioration of proteins from incorrect storage conditions, incorrect foaming technique).	Solves problem when milk will not foam.
	2.05.4	Demonstration of consistently good milk techniques to produce the correct texture and temperature of foam.	Foams milk to produce consistently high quality micro-foam (Level 2 or above on the CDS Foam Quality Guide). Pours milk to achieve correct foam level as well as the right texture and temperature for the drink.
	2.05.5	Demonstration of ability to 'free pour' one latte art pattern to a consistently reasonable standard – on two consecutive drinks repeatedly.	'Freepours' latte art pattern consistently to a reasonable standard or higher as set out in the CDS Latte Art Standards.
2.06 BARISTA MENU	2.06.1	Demonstration of preparation of a range of commonly ordered drinks to a good standard (espresso, macchiato, americano, cappuccino, latte, flat white).	Prepares drinks demonstrating correct CDS methodology. Final drinks to comply with quality standards as laid out in the practical examination paper and CDS Drinks Definitions



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	2.06.2	Demonstration of managing a complex order of drinks to a high standard – prepared quickly with efficient use of the espresso machine.	Prepares a complex order of 4 beverages to a consistently high standard quickly and efficiently - within 6 minutes.
2.07 HYGIENE, HEALTH & SAFETY	1.07.1	Demonstration of organisational and operational policies and procedures (for beverage preparation and service, cleaning and storage) – to keep everything in the espresso workspace safe and hygienic.	Implements policies and procedures for hygiene and safety, taking local laws and manufacturers instructions into consideration.
	1.07.2	Understanding of the causes of cross contamination in an espresso workspace (steam wand wipes being used on the floor or bench, jugs not emptied and cleaned between each use, unhygienic personal habits with regard to hands, cloths and clothing).	Identifies and minimises risks related to cross contamination. Colour codes wipes and uses different ones for different purposes. Empties and cleans jugs between each use. Practices hygienic personal habits.
	1.07.3	Understanding of the causes of direct contamination in an espresso workspace (wipes and not rinsed regularly, steam wands not being cleaned immediately after each use, milk left out of the refrigerator, incorrect storage temperatures for potentially hazardous foods, beans and condiments left in open containers, vermin contaminating ingredients, leaving splashes and spills left machines and the workspace, sneezing and coughing over the workspace).	Predicts and minimises risks related to direct contamination. Wipes and cloths are rinsed regularly. Milk is kept in the refrigerator when not in use. Operating temperature for the refrigerator is checked and maintained at legal temperatures Stores all potentially hazardous foods (milk, cream etc.) at the correct legal temperatures. Stores dry foods (beans, chocolate etc.) to prevent access by vermin. Practices stock rotation all storage areas. Regularly cleans all splashes, drips and spills from machinery, accessories and workspace. Covers mouth and rinses hands regularly when coughing and sneezing.
	1.07.4	Understanding of safety hazards in an espresso workspace (burrs in the grinding mechanism, hot water and steam from the espresso machine, the backflushing procedure, spills on the floor, incorrect storage and use of cleaning chemicals, spills and leaks around electrical cords and machines, incorrect technique when carrying heavy items, repetitive strain injury from incorrect tamping technique).	Takes care when cleaning around the burrs in the grinder. Takes care when using steam and hot water from the espresso machine. Flushes cleaning chemicals from espresso machine and grinder properly. Takes care when backflushing the espresso machine. Stores cleaning chemicals away from foods. Cleans up spills and has leaks fixed immediately. Keeps electrical cords away from water. Uses correct/safe techniques for carrying heavy items and tamping.
2.08 CUSTOMER SERVICE	2.08.1	Understanding of the importance of maintaining high standards of personal hygiene.	Keeps body and clothing (including apron) clean and hygienic.
	2.08.2	Demonstration of high standards of personal presentation.	Maintains neat and tidy personal presentation.
	2.08.3	Demonstration of good communication skills.	Listens well and speaks clearly.
	2.08.4	Understanding of what good customer service means.	Focuses on customers needs.



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	2.08.5	Demonstration of good techniques to provide a high standard of customer service when greeting customer and taking orders.	<p>Greets customer appropriately. Requests order and answers questions accurately about the preparation and service of an espresso, macchiato, Americano, cappuccino, latte and flat white.</p> <p>Manages a queue through taking orders efficiently.</p> <p>Identifies what the customer is ordering (their true drink order, including any special requests).</p> <p>Uses appropriate body language, tone and attitude when communicating with customers.</p> <p>Uses techniques to remember what customers order.</p>
	2.08.6	Demonstration of good techniques to provide a high standard of customer service when preparing orders for customers.	<p>Uses preparation techniques that save time and energy.</p> <p>Prepares drinks to a consistently high standard.</p> <p>Prepares orders according to customers' special requests (a different type of milk, decaffeinated beans, more or less foam, hotter or cooler, larger or small, stronger or weaker etc).</p> <p>Uses preparation techniques to identify different drinks that look the same.</p> <p>Maintain communication with customer during preparation of order.</p>
	2.08.7	Demonstration of good techniques to provide a high standard of customer service when serving orders to customers.	<p>Serves orders in an appropriate timeframe and manner.</p> <p>Handles complaints appropriately.</p>
2.09 CLEANING, MAINTENANCE & TROUBLE- SHOOTING	2.09.1	Demonstration of good techniques for cleaning the espresso machine and grinder.	Cleans the espresso machine and grinder at least daily.
	2.09.2	Understanding of key problems with the espresso machine (blocked/ dirty steam wands, waste pipes, hoses, showers and filter baskets, leaky connections, worn seals, machine not heating correctly, steam pressure too low or too high, scale, gauges not registering the right levels, broken filter basket spring), how to solve them or who to refer them to.	Solves all problems related to the espresso machine immediately – according to manufacturers recommendations, ability and allowable level of responsibility. Understands personal limitations and when to contact an engineer.
	2.09.3	Understanding of key problems with the grinder (grinder is overheating, grinder won't work, worn burrs, an obstruction between the burrs, clogged/dirty dosing chamber, broken dosing lever spring), how to solve them or who to refer them to.	Solves problems related to the grinder immediately – according to manufacturers recommendations, ability and allowable level of responsibility.
2.10 FINANCIAL MANAGEMENT	2.10.1	Awareness of costs involved in preparing and serving espresso beverages (cost of ingredients, including wastage).	<p>Can identify profit margins on commonly produced drinks</p> <p>Stores ingredients correctly to prevent spoilage.</p> <p>Orders in appropriate quantities to prevent spoilage and waste.</p> <p>Uses preparation techniques that minimise waste.</p>



LEVEL: PROFESSIONAL

OVERVIEW: DESIGNED TO TEST ADVANCED SKILLS AND DETAILED KNOWLEDGE OF THE SCIENCE BEHIND PROCESSES USED, EXPECTED FROM A PROFESSIONAL BARISTA (FOR EXAMPLE, FROM SOMEONE WORKING AS A BARISTA FOR 12 MONTHS OR MORE, WITH SOME MANAGEMENT RESPONSIBILITIES). SUCCESSFUL CANDIDATES SHOULD HAVE A DETAILED UNDERSTANDING OF THEIR INGREDIENTS AND OF THE TECHNIQUES AVAILABLE TO MAXIMISE THE QUALITY OF THE DRINKS MADE. THEY SHOULD BE ABLE TO MANAGE THE SKILLS OF OTHERS TO PRODUCE QUALITY DRINKS AND PROVIDE EXCELLENT CUSTOMER SERVICE. THEY SHOULD BE ABLE TO MAINTAIN THEIR EQUIPMENT TO ENSURE CONTINUED QUALITY. COURSE LENGTH IS ESTIMATED AT 2 - 3 DAYS.

Introduction to Coffee, Barista Foundation, and Intermediate Brewing and Grinding are recommended (but not mandatory) pre-requisite modules. Holding the Intermediate Barista Certification is a mandatory requirement. All knowledge and skill from these modules will be assumed as being held and may be tested through the practical and/or written assessments.

BLOOMS TAXONOMY: Applying / Analyzing / Evaluating

Recommended reading:

3.01 COFFEE BEANS	3.01.1	Awareness of the components of blend/single origin of coffee used (variety/origin/process).	Can describe beans/blend in terms of their variety, origin and processing method used.
	3.01.2	Awareness of roast colour/degree, of coffee used (light, medium, dark).	Can describe beans/blends in terms of their roast degree.
	3.01.3	Understanding of what various beans/blend components contribute to flavour and mouthfeel.	Can explain the flavours delivered by the variety, origin, processing and roast, of the bean/s being used Can describe a blend of their own in terms of beans variety, origin, processing and roast and the desired flavour and mouthfeel this would achieve.
	3.01.4	Understanding of how changes in brewing parameters affect flavour from differing varieties, origins, processes and roasts.	Adapts brewing parameters (dose, grind texture, water quantity, water temperature, pressure (if machine allows)) to achieve desired flavour and body.
	3.01.5	Understanding of the various decaffeination processes.	Offers correct advice to customers on the various decaffeination processes.
	3.01.6	Understanding of how freshness affects the extraction process and espresso flavor.	Can distinguish coffee that is too fresh or stale by visual clues during its extraction, and flavour. Uses techniques to maintain freshness and achieve desired flavour in beans/blends. Uses techniques to maintain freshness in slow-selling beans/blends (guest blends, single origins, decaffeinated).
	3.01.7	Understanding of how different packaging methods affect freshness.	Selects packaging that maximises self life.
	3.01.8	Awareness of how climatic condition and environmental condition affect freshness.	Stores away from extremes of heat and cold.
3.02 WORKSPACE MANAGEMENT	3.02.1	Analysis of café layout - to ensure speed and efficiency, good workflow and smooth customer traffic.	Identifies problems with café layout. Adjusts café layout to correct problems related to speed, efficiency, workflow and customer traffic.
3.03 GRINDING, DOSING AND TAMPING	3.03.1	Evaluation of various grinder features – including motor speed, size and types of burrs (flat or conical), grind distribution, degree of static and waste, construction, ease of use (for grinders with a dosing chamber and on-demand grinders).	Selects grinder based on advantages and disadvantages related to the needs of the situation it will be used for.



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	3.03.2	Evaluation of features of flat and conical burrs from a scientific perspective (motor speed, particle size, heat dispersion, burr replacement).	Selects type of burrs based on advantages and disadvantages related to the needs of the situation they will be used for.
	3.03.3	Evaluation of features of different styles of hand tamp.	Selects hand tamp based on ease of use and diameter of filter basket it will be used with.
	3.03.4	Evaluation of the effects of different calibrations for grind and dose.	Recognises that changing the grind may also change dose size (with both volumetric and time based dosing). Recognises that changing the dose causes changes to espresso flavour and body. Recognises the grinder adjustments needed for different degrees of roast, and resultant different bean density.
	3.03.5	Analysis of problems other baristas have with their dosing and tamping techniques.	Identifies problems other baristas have with dosing and tamping. Offers correct advice and solutions related to dosing and tamping.
3.04 EXTRACTION & BREWING	3.04.1	Evaluation of latest features on espresso machines (temperature stability, pressure profiling, multiple boilers, PID systems, pre-infusion).	Recognises that changing in temperature and pressure during extraction can alter espresso flavour and body. Can judge what adjustments need to be made on an espresso machine to achieve a desired flavour and body in the espresso.
	3.04.2	Evaluation of the extraction measurement tools and techniques to assess espresso (espresso brewing charts and formulas, measurement devices and software). Understanding of the process of measurement using such tools.	Can demonstrate the use of extraction measurement tools (digital/optical refractometer or TDS meter) and techniques to assist in monitoring the extraction process. Understands the meaning of "extraction percentage", "total dissolved solids" and "espresso brew formula".
	3.04.3	Understanding of the interrelationship of the various extraction parameters and how changes in one may cause changes in the other.	Understands that changes to the mass to energy ratio (the relationship between the quantity of ground coffee and the temperature of the hot water), will change extraction %. Understand the effect of long and short extraction ratios on espresso flavour/texture. Understand the principle of a "balanced" extraction. Understand how to measure extraction percentages in espresso and why an extraction of 18-22% is considered balanced.
	3.04.4	Analysis of problems other baristas have with their extraction techniques.	Can identify problems other baristas have with their extraction techniques. Offers correct advice and solutions related to the extracting espresso.
3.05 MILK TECHNIQUES	3.05.1	Understanding of the components of milk and its production process.	Understand pasteurisation, ultra heat treatment, and homogenisation. Be aware of the "route to market" of milk and its shelf life. Understands use-by dates and shelf life of milk as well as storage requirements – from supplier to barista to customer.



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	3.05.2	Evaluation why milk foams and sometimes doesn't – from a scientific perspective.	<p>Understand the role of protein in forming foam and fat for coating the foam improving mouthfeel, drainage and flavour. Understand what implications this may have for a range of milk alternatives in their performance for a barista.</p> <p>Can identify deterioration in foam quality caused by aging milk. Can identify milk that will not foam as it has "gone off" (Lipolysis and Proteolysis).</p> <p>Understand how excessive heat denatures milk protein deteriorating flavor.</p> <p>Understand why some customers may be intolerant to lactose. Not producing the enzyme lactase, required to break down lactose into glucose and galactose.</p>
	3.05.3	Demonstration of techniques to consistently produce high quality 'microfoam'.	Can consistently deliver the highest quality foam standards as per the CDS Foam Quality Guide.
	3.05.4	Demonstration of 'freepouring' two latte art patterns to a consistently good standard – on two consecutive drinks.	'Freepours' latte art patterns consistently to a reasonable standard or higher on CDS Latte Art Standards.
	3.05.5	Demonstration of good techniques for improving micro-foam and maintaining consistency in drinks.	<p>Swirls milk in the jug before pouring when required.</p> <p>Splits the milk into two separate jugs before pouring, to obtain even foam levels on drinks, when required.</p>
	3.05.6	Analysis of problems other baristas have with their milk techniques.	<p>Can identify problems other baristas have with their milk techniques.</p> <p>Offers correct advice and solutions related to texturing and heating milk.</p>
3.06 BARISTA MENU	3.06.1	Understanding of standard drinks range as well as regional variations around the world.	Can describe variations to standard drinks range.
	3.06.1	Demonstration of good techniques to prepare complex orders of drinks quickly and efficiently.	Standard TBC
	3.06.3	Evaluation of espresso menus with regard to content and design.	<p>Can design and write a menu.</p> <p>Selects drinks (and prices) based on thorough research.</p>
3.07 HYGIENE, HEALTH & SAFETY	3.07.1	Demonstration of organisational and operational policies and procedures (for beverage preparation and service, cleaning and storage) – to keep everything in the espresso workspace safe and hygienic.	<p>Documents and implements policies and procedures related to hygiene and safety – taking local laws and manufacturer's instructions into consideration.</p> <p>Trains staff in policies and procedure related to safety and hygiene.</p>
2.08 CUSTOMER SERVICE	2.08.1	Evaluation of customer service provided to ensure quality drinks, speed of service, and exceeding customer expectations.	<p>Documents and implements policies and procedures related to customer service.</p> <p>Can develop methods of assessing customer satisfaction.</p> <p>Can evaluate work procedures and systems as to their suitability for good customer service.</p> <p>Develops methods for collecting and evaluating feedback from customers – and implements necessary changes.</p>



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	2.08.2	Demonstration of consistently exceptional customer service when communicating with customers.	Communicates accurately on a range of coffee-related topics – while preparing and serving orders. Can utilise onselling and upselling techniques.
	2.08.3	Can develop policy for complaint handling and advise on techniques for dealing with complaints.	Develops steps for dealing with complaints and evaluating their effectiveness. Understands listening techniques and empowerment systems.
3.09 CLEANING, MAINTENANCE & TROUBLE- SHOOTING	3.09.1	Evaluation of cleaning and maintenance procedures.	Documents and implements policies and procedures related to cleaning and maintenance – taking local laws and manufacturer's instructions into consideration.
	3.09.2	Demonstration of good techniques for maintenance of the espresso machine.	Takes grinding mechanism apart for cleaning and to replace burrs when worn. Takes dosing mechanism apart for thorough cleaning and to replace the spring in the dosing lever when broken.
	3.09.3	Understanding of the need water filtration and the various methods available.	Can evaluate the effectiveness of carbon, ion exchange and reverse osmosis filters and their appropriateness for reducing scale and improving water quality.
3.10 FINANCIAL MANAGEMENT	3.10.1	Understanding of the costs related to the price of a drink – including cost of ingredients, staff costs, overheads (rent/rates, electricity, gas, rates insurance etc.) and taxes.	Analyses prices of drinks to ensure appropriate profit is made. Develops standardised recipes/specifications to evaluate profits, control costs, and maintain consistency.
	3.10.2	Understanding of factors other than costs that can impact on profit.	Implements policies and procedures to minimise spoilage, waste and theft.
	3.10.3	Analysis of supply sources and ordering procedures.	Selects appropriate suppliers (quality, price, reliability) and implements appropriate delivery procedures.
	3.10.4	Demonstration good techniques in staff management.	Documents policies and procedures related to staff. Implements systems for rostering.



READING LIST

<p>FOUNDATION:</p> <p>Barista Bible</p> <p>The Ultimate Coffee Book for Beginners & Professionals</p> <p>Coffee with Tim Wendelboe</p> <p>Coffee: Beans, barista & latte art</p> <p>Espresso Quest</p>	<p>Christine Cottrell</p> <p>Johanna Wechselberger, Tobias Hierl</p> <p>Tim Wendelboe</p> <p>Coffee Community</p> <p>Instaurator</p>	<p>Book</p> <p>Book</p> <p>Book</p> <p>iPad app</p> <p>Book</p>
<p>INTERMEDIATE:</p> <p>The Professional Barista's Handbook</p> <p>The Espresso Coffee Production System</p> <p>The Coffee Tasting Book</p> <p>Coffee Basics Posters</p> <p>Espresso Quest</p>	<p>Scott Rao</p> <p>Franco E Mauro Bazzara</p> <p>Franco E Mauro Bazzara</p> <p>Kaffe Konsulat</p> <p>Instaurator</p>	<p>Book</p> <p>Book</p> <p>Book</p> <p>Posters</p> <p>Book</p>
<p>PROFESSIONAL:</p> <p>Espresso Coffee: The Science of Quality</p> <p>The Coffee Brewing Handbook</p> <p>The Coffee Cupper's Handbook</p> <p>McGee on Food & Cooking</p> <p>Some Aspects of Espresso Extraction</p>	<p>Andrea Illy & Rinantonio Viani</p> <p>Ted Lingle</p> <p>Ted Lingle</p> <p>Harold McGee</p> <p>Jim Schulman</p>	<p>Book</p> <p>Book</p> <p>Book</p> <p>Book</p> <p>Article/on-line</p>

BARISTA FOAM STANDARDS



<p>LEVEL 1: Excellent milk standard</p>		<p>Microfoam produced smooth shiny and moist. No visible bubbles.</p>
<p>LEVEL 2: Very good milk standard</p>		<p>Microfoam produced smooth and moist. Very few small bubbles <0.5mm diameter.</p>
<p>LEVEL 3: Acceptable milk standard (Minimum acceptable to pass Foundation requirements)</p>		<p>Microfoam produced smooth and moist. Microfoam texture with many small (<1mm diameter) and very few larger (1-2mm diameter) bubbles.</p>
<p>LEVEL 4: Unacceptable milk standard (Failing requirement for Foundation level)</p>		<p>Many large (>1mm + diameter) bubbles present. Texture uneven/dull/dry.</p>



BARISTA FOAM STANDARDS

LEVEL 5:

**Very poor milk standard
(Failing requirement for Foundation
level)**



Many large (>1mm + diameter) bubbles present. Very dry and uneven looking like it has been placed on by spoon/spatula rather than poured



LATTE ART STANDARDS

Contrast	<ul style="list-style-type: none"> ● Sharp contrast between clean white foam of the pattern against the rich colour of the cr�ma. (Cr�ma colour may vary based on coffee used). ● This sharp contrast should be demonstrated throughout the majority of the pattern to be considered excellent. 	<ul style="list-style-type: none"> ● The pattern can be clearly identified but there is a degree of "marbling" between the white foam and the brown cr�ma. ● There are areas of "beige" where the cr�ma and foam have mixed 	<ul style="list-style-type: none"> ● Contrast is generally poor so that the pattern is hard to distinguish. ● Much mixing of the white foam into the cr�ma.
Harmony, size and position in cup	<ul style="list-style-type: none"> ● For right-handed drinkers the pattern should ideally be presented with its base at 6 o'clock (tolerance between 5-7 o'clock) and the handle at 3 o'clock. ● The size of the pattern should suit the size of the top of the cup, big enough to fill the space while still leaving space to the edges to "frame" the design. ● If multiple patterns are poured in the cup then they should be positioned in a complementary manner to each other, giving an overall attractive design. 	<ul style="list-style-type: none"> ● For right-handed drinkers the pattern is presented with its base between 4-8 o'clock ● The size of the pattern is considered slightly too small for the space available. ● The size of the pattern is too big for the cup and loses its "frame" of cr�ma. ● The pattern is poorly positioned in the cup e.g. to one side of the cup or touching the side/top/base. ● Multiple patterns are unbalanced in their size or quality, but still clearly identifiable. 	<ul style="list-style-type: none"> ● For a right-handed drinker the pattern is poured upside down when the handle is positioned at 3 o'clock.
Symmetry of pattern (if required)	<ul style="list-style-type: none"> ● Key free pour patterns such as hearts, rosettas and tulips need to have good symmetry to be considered excellent. The pattern should be a good mirror image if cut down the middle. ● "Absolute" symmetry is not assessed, e.g. in each leaf of a rosetta, but symmetry in the overall shape of the pattern. 	<ul style="list-style-type: none"> ● Symmetry of the pattern is fair but not considered excellent 	<ul style="list-style-type: none"> ● Symmetry is considered poor. ● Pattern is hard to distinguish and so symmetry is difficult to assess.
Foam quality	<ul style="list-style-type: none"> ● CDS Foam Quality Level 1-2 	<ul style="list-style-type: none"> ● CDS Foam Quality Level 3-4 	<ul style="list-style-type: none"> ● CDS Foam Quality Level 5-6
Identification of pattern	<ul style="list-style-type: none"> ● Pattern is clearly identified and attractive 	<ul style="list-style-type: none"> ● Pattern is clearly identified 	<ul style="list-style-type: none"> ● Pattern is not clearly identified