All Grain Brewing Checklist

2 Step Batch Sparge with No Mash Out, Cooler Mashtun

		Double check all ingredients are on hand for recipe, take out of refrigerator and prepare yeast (if needed).		
		Plan out recipe (Brewgr / Brewersfriend / Beersmith / Brewtoad / hand calc / wing it)		
		Setup equipment, ensure valves are closed, and give it all the equipment a good rinse		
		Begin heating strike water		
		Add water chemistry components to strike water (if needed)		
		Check grain temperature		
Mash				
		Dough In - Once at Strike Temperature, place strike water in mashtun cooler, stir in grains		
		Start 60 min timer		
		record initial temperature		
		Calibrate pH probe, or get pH strips ready		
		Begin heating sparge water (Sparge Volume)		
		At 15 min in, check pH and add to 5.2		
		Check pH at 30 min in and record pH		
		At 60 min in (normally), record final temperature and total mash time		
Sparge				
		Vorlauf (slowly open mashtun valve and collect collect runnings until clear (1 quart to 1 gal)		
		Once running clear, direct runoff to kettle (first runnings) open valve all the way and slowly pour runnings to top of mash (along side of mashtun or through colander)		
		Drain mashtun completely, check that 1^{st} Runnings Volume has been collected (no stuck mash)		
		Check sparge water is at Sparge Temp (normally 185F), turn secondary kettle heat		



	Add half of sparge water to mashtun, stir thoroughly and check temperature $-165\text{-}168\text{F}$ is ideal, lower temp is ok (pH is critical factor)
	Perform vorlauf, and drain to mashtun
	Turn on kettle heat
	Check kettle volume, ensure Remaining Sparge Water + Kettle Volume = Desired Pre-boil Volume
	Perform vorlauf and sparge again with the remaining sparge water (sparge water should be hot (~170F), but nailing 168F mash temp isn't critical)
	Check pre-boil volume in kettle
	Measure and record pre-boil specific gravity
Boi	
	Bring pot to boil
	 Add initial hops (depending on recipe)
	Start 60 min timer
	With 10 minutes left, submerge wort chiller and metal stirrer (if using immersion chiller)
	Flame out
	Add any flame-out hops or other additions
	Record post-boil volume
Fina	al Steps
	Turn on water to wort chiller (high at first, then throttle to minimum flow after a couple of minutes), stir wort gently
	Sanitize primary fermenter, cover, and airlock/blow off tube
	When wort is cooled to 70F, transfer wort to fermenter
	Record post-boil specific gravity
	Aerate wort
	Pitch yeast
	Move fermenter to fermentation area, fit airlock/blow off tube
	Start temperature controller or start new brew session for BrewPi (if applicable)



Rac	cking (after 7 days)
	Move fermenter to top of table and let sediment settle
	Sanitize stopper, racking cane, hose, and secondary fermenter
	Rack in to secondary, save sample for tasting and hydrometer reading
	Move beer to fermentation area, and sanitize and install airlock
Dry	Hop (3-5 days before bottling or cold crashing)
	Sanitize and remove cover
	Sanitize hop bag, open and pour hops into beer
	Reattach airlock
Bot	ttling (2-3 weeks for ales)
	Calculate amount of priming sugar needed, and make priming sugar solution with boiling water. Let cool to room temperature in covered pan.
	Move fermenter to top of table and let sediment settle
	Sanitize stopper, racking cane, hose, bottling bucket, bottles and lids/caps
	Sanitize bottles, lids/caps
	Pour priming sugar in bottling bucket
	Carefully rack beer into bottling bucket, save a sample for tasting and hydrometer sample
	Gravity feed beer into bottles
	Cap bottles and move to cool dark area for bottle conditioning
Ke	gging (optional instead of bottling)
	Move fermenter to top of table and let sediment settle
	Sanitize stopper, racking cane, hose, and keg
	Rack beer straight into keg, add priming sugar or force carbonate
Dri	nk Beer
	Beer is ready to start consuming about 2 weeks after bottling (or 3-4 weeks after bottling if it was cold crashed)

