



# MASTER BREWER ACADEMY

## MBA - Summer Short Course - 2022

**Description:** The Master Brewer Academy’s 2-week intensive “short-course” was designed for individuals who are interested in entering into the professional craft brewing industry, have several years of brewing experience, and want to deepen and expand their knowledge of the science and technology of brewing. This course will be fast-paced, and those seriously committed to working hard inside and outside of the scheduled classes will find near exponential growth.

Date	Time	Content	Instructor(s)	Location
Mon 8/22	7-9 am	Welcome Intros - Case Studies Course overview, goals, outcomes Theme - “synergy” Intro - MALT	Space / Fernando	La Tropical
	9-11:30	Malting / Milling		
	11:30 - 12	LUNCH		
	12-3	Mash - enzymes, temps, starch test Lauter / Boil Calculations	Space	Est. 33
	3-3:30	Sensory	Space	
Tues 8/23	7-10 am	Brew Day Shadow - Mill, Mash, Lauter	Dom / Space	Wynwood
	10:20-11:30	Specialty Malts - color flavor Malt related off-flavors	Space	Est. 33
	11:30-12	LUNCH - Practice quiz		
	12-3:30	Intro - WATER Sources / Treatments Chemistry Styles / Additions - R/O systems Calculations Troubleshooting water related off-flavors		
Wed 8/24	7-8	Recap - Malt & Water	Space	La Tropical
	8-10	Intro HOPS Hop Products / Dry-Hopping	Space / Fernando	

Wed 8/24	10:20-11:30	Hops - Isomerization & Utilization	Space / Jack	
	11:30-12	LUNCH		
	12-1	Dry-Hopping- Recap	Space	
	1-2:30	Student Case Study Presentations	N/A	
	2:30-3:30	Unit I Test		
Thurs 8/25	7-8	Theme - "Synergy" Intro - BREWTECH	Space	Dogfish Head
	8-10	4-Vessel System Overview: Mash, Lauter, Kettle, WP	Eric / Kyle	
	10:20-11:30	Vessel configurations I - pros / cons	Space	Est. 33
	11:30-12	LUNCH		
	12-1:30	Vessel configurations II - pros / cons		
	1:30-2:15	Activity - moving water		
	2:15-3	Pumps, hoses, gaskets, clamps...		
	3-3:30	Overall recap / synergy	Space	
Fri 8/26	7-7:30	Intro new Case Studies	Space	Tank
	7:30-8	Intro - YEAST		
	8-9:30	Yeast Biology		
	9:30-11	"Happy Yeast"	Space	
	11-12	LUNCH		
	12-1:30	Yeast - Calculations, counts, viability	Willie	
	1:30-2:30	Yeast "Off-flavors" - troubleshoot	Activity	
	2:30-3:30	Fermentation 101 - data trends, phases	Space / Willie	
Sat 8/27	9-3	Brew Day - Hands on the Pilot System Time - Brewer Q/A	Space / Fernando	Est. 33

Mon 8/29	7-8	Recap; Theme: "Synergy" - revisit	Space	*Beat Culture  Est. 33	
	8-10	FV's - styles, shapes, temp control			
	10-11:30	Fermentation - Practical	Space		
	11:30-12	LUNCH			
	12-1:30	Fermentation - revisit: off-flavors / by-products, "happy yeast" & data	Space / Weintraub		
	1:30-3	Yeast Harvesting / Storage / Prop			
	3-3:30	Sensory	Harold		
Tues 8/30	7-8	Cellar Operations - clarification, filtering, centrifuge	Fernando	La Tropical	
	8-9	Study Guide / Brewer Q & A			
	9:20-10	Presentation prep	N/A	La Tropical	
	10-11:30	Student Case Study Presentations			
	11:30-12	LUNCH			
	12-1	Unit I Test			
	1-3	Plant Engineering	Katzer		
	3-3:30	Intro - PACKAGING	Space		
Wed 8/31	7-10	Packaging - Canning line operations Product testing (DO, CO <sub>2</sub> , seams...), labeling, distro	Fernando / Harold		La Tropical
	10:20-11:30	Sanitization 101 - overview	Space	Est. 33	
	11:30-12	LUNCH			
	12-1	Safety (EcoLab)	Rudy		
	1-2:30	Sanitization SOPs - brewhouse, FVs, BBTs, setting up "loops"			
	2:30-3:30	Run loops - Hands-on			

Thurs 9/1	7-8	Recap - Practical Sanitization	Fernando	Est. 33
	8-9	CIP - skids, titrations, efficacy	Todd	
	9-10	Wastewater, regulations, legal		
	10:20-11:30	Intro - QA / QC	Space	La Tropical
	11:30-12	LUNCH		
	12-2:30	Recipe Formulation	Space	
	2:30-3:30	Alternative Fermentations	Manthe (OddBreed)	
Fri 9/2	9-10	Quality - "building a quality lab"	Space	La Tropical
	10 - 11:30	Quality Program - Necessary craft brewery tests	Fernando / Space	
	11:30-12:30	LUNCH		
	12:30-3:30	"Starting your own craft brewery"	Danny	