

**Wood Moisture Solutions, Lumber Drying Workshop Complete**

	Section and modules	Slides	Topics	Quizzes	Narration		Week
					Required	Optional	
1	COURSE INTRODUCTION	19	2	1	10:32	01:05	
1	1A Course introduction	19	2	1	10:32	01:05	1
2	GETTING STARTED	37	2	2	25:25	00:00	
2	2A Why wood is dried	17	1	1	15:25	00:00	1W
3	2B Safety	20	1	1	10:00	00:00	1W
3	WOOD, THE MATERIAL TO BE DRIED	77	5	5	39:21	10:58	
4	3A Features of trees and lumber	15	1	1	14:13	00:00	1W
5	3B Softwood structure	15	1	1	10:35	00:00	1
6	3C Hardwood structure (optional)	20	1	1	00:00	10:58	
7	3D Wood variability and its impact on drying	17	1	1	10:14	00:00	1
8	3E Specific gravity	10	1	1	04:19	00:00	1
4	PROPERTIES OF AIR AND WATER VAPOR	35	3	2	35:38	00:00	
9	4A Measuring temperature and humidity	21	2	1	19:14	00:00	2
10	4B Psychrometrics	14	1	1	16:24	00:00	2W
5	MOISTURE CONTENT AND ITS EFFECT ON WOOD	94	8	8	33:49	21:10	
11	5A Moisture content	13	1	1	10:53	00:00	2W
12	5B Oven-dry method (optional)	14	1	1	00:00	07:30	
13	5C Moisture content samples (optional)	31	2	2	00:00	13:40	
14	5D Water in wood, EMC	17	2	2	11:08	00:00	2W
15	5E Shrinkage and strength	19	2	2	11:48	00:00	2W
6	WATER MOVEMENT IN WOOD	46	6	6	33:52	00:00	
16	6A Water movement in wood	21	3	3	13:56	00:00	2
17	6B Factors affecting the drying rate	25	3	3	19:56	00:00	3
7	STRESS AND DEFECTS	77	5	5	52:44	18:19	
18	7A Stress development	19	2	2	13:27	03:04	3
19	7B Stress relief, conditioning	20	1	1	10:00	15:15	3W
20	7C Defects due to wood-related factors	15	1	1	10:02	00:00	3W
21	7D Defects that develop in the kiln	23	1	1	19:15	00:00	3W
8	SCHEDULES	249	16	12	1:48:11	1:13:34	
22	8A Air drying (optional)	54	4	3	00:00	21:55	
23	8B Types of schedules	17	1	1	20:00	00:00	3
24	8C Lumber segregation and kiln startup	10	1	1	10:02	00:00	3
25	8D Time-based schedules	18	1	1	16:17	00:00	4
26	8E Moisture-based schedules (optional)	41	2	2	00:00	30:24	
27	8F Equalization	21	1	1	22:40	00:00	4W
28	8G Conditioning and cooldown	21	1	1	15:20	00:47	4W
29	8H Schedule examples	28	2	0	05:51	11:25	4W
30	8I Special schedules	28	2	1	11:18	09:03	4
31	8J High-temperature drying	11	1	1	06:43	00:00	4
9	HOW KILNS OPERATE	186	10	10	2:22:34	0:18:39	
32	9A Kiln designs	26	1	1	16:45	07:38	5
33	9B Steam	20	1	1	12:38	02:35	5W
34	9C Steam-heated kilns, steam delivery	24	1	1	20:11	00:00	5W
35	9D Steam-heated kilns, condensate return	19	1	1	12:11	00:00	5W
36	9E Direct-fired kilns (optional)	15	1	1	00:00	08:26	
37	9F Venting and humidification	18	1	1	20:24	00:00	5
38	9G Fan systems	18	1	1	19:41	00:00	5
39	9H Baffling	15	1	1	13:13	00:00	6
40	9I Measuring airflow	19	1	1	15:36	00:00	6
41	9J Selecting an air velocity	12	1	1	11:55	00:00	W6

	10	PREPARING A CHARGE	62	3	3	0:31:26	0:12:56	
42	10A	Sorting in the sawmill	18	1	1	14:54	00:00	W6
43	10B	Stacking	28	1	1	16:32	00:00	W6
44	10C	Sorting at the planer (optional)	16	1	1	00:00	12:56	6
	11	RUNNING A CHARGE	105	9	5	1:21:34	0:03:02	
45	11A	Kiln loading	32	1	1	13:46	00:00	6
46	11B	Preparing to dry	16	1	1	13:10	00:00	6
47	11C	Measuring moisture content	27	4	1	20:18	03:02	7 - TG
48	11D	Running a charge	30	3	2	34:20	00:00	8
	12	MAINTENANCE	89	6	6	1:05:08	0:00:00	
49	12A	How the controller works	28	2	2	20:17	00:00	8W
50	12B	Control system maintenance	28	2	2	23:10	00:00	8W
51	12C	Mechanical maintenance	33	2	2	21:41	00:00	8
	13	OPERATING EFFICIENTLY	54	4	4	0:37:26	0:00:31	
52	13A	Cost	23	1	1	15:56	00:00	8
53	13B	Energy	19	2	2	12:49	00:31	9
54	13C	Minimizing downtime	12	1	1	08:41	00:00	9
	14	QUALITY ASSURANCE	64	4	4	1:01:35	0:01:56	
55	14A	Understanding data	23	2	2	23:08	01:56	9
56	14B	Continuous improvement	16	1	1	15:57	00:00	9W
57	14C	Using the planer moisture meter	25	1	1	22:30	00:00	9W

SUMS:	1194	83	73	12:39:15	2:42:10	W=
	Slides	Topics	Quizzes	Required	Optional	webinar