

## Intermediate Class Schedule

PAGE	TOPIC	TEACHING STYLE	MINUTES
<b>Chapter 1: Basic Mechanical Skills</b>			
1-ii	Class Welcome Talk	Lecture	10
2	Threaded Fastener Tension & Torque	Lecture	10
4	Lubrication, Threadlockers, & Cleaners	Reading	—
5	Bearing Systems	Reading	—
6	Diagnosing & Solving Mechanical Problems	Reading	—
6	Tools & Tool Selection	Reading	—
6	Repair Stands	Reading	—
7	Home Shop Setup	Reading	—
8	Maintenance Schedule	Lecture	5
<b>TOTAL:</b>			<b>25</b>
<b>Chapter 2: Tires &amp; Tubes</b>			
2-i	Chapter Overview	Lecture	5
12	Wheel Removal	Reading	—
14	Removal of Tire & Tube from Rim	Reading	—
15	Inner Tube Inspection	Lecture	5
16	Tire Inspection	Lecture	5
17	Rim Strip	Reading	5
17	Inner Tube Repair	Demo & Lab	10
17	Inner Tube Repair with Self-Vulcanizing Patches		
19	Temporary Tire Repair with Tire Boot	Reading	—
20	Tire & Tube Sizing	Reading	—
21	Installation of Tire & Tube on Wheel	Demo	10
22	Wheel Installation	Demo	10
26	Tubeless Systems	Demo	10
27	Tubeless Conversion Systems	Reading	—
<b>TOTAL:</b>			<b>60</b>
<b>Chapter 3: Rear Sprockets</b>			
3-i	Chapter Overview	Lecture	5
34	Cassette Sprocket Removal & Installation	Demo & Lab	15
36	Freewheel Sprocket Removal & Installation		
38	Sprocket Inspection & Cleaning	Lecture	10
39	Fixed Gear Sprocket	Reading	—
<b>TOTAL:</b>			<b>30</b>
<b>Chapter 4: Hubs</b>			
4-i	Chapter Overview	Lecture	5
42	Hub Bearing Service: Adjustable Cup-and-Cone Type	Lecture	5
45	Hub Adjustment	Demo & Lab	20
47	Cartridge Bearing Hubs	Lecture	10
<b>TOTAL:</b>			<b>40</b>
<b>Chapter 5: Wheel Truing</b>			
5-i	Chapter Overview	Lecture	5
54	Wheel Truing Overview	Lecture	5
56	Truing Procedures	Lecture	10
57	Lateral Truing	Demo & Lab	20
58	Radial Truing	Demo	5
58	Wheel Centering (Dishing)	Demo	5
60	Spoke Tension	Demo	5
62	Wheel Wear, Damage, & Repair	Lecture	5
<b>TOTAL:</b>			<b>60</b>

<b>Chapter 6: Pedals</b>			
6-i	Chapter Overview	Lecture	5
66	Pedal Removal	Demo & Lab	5
66	Pedal Installation	Demo & Lab	5
67	Damage to Crank Pedal Threads	Reading	—
<b>TOTAL:</b>			<b>15</b>
<b>Chapter 7: Cranksets</b>			
7-i	Chapter Overview	Lecture	5
70	Crank Types	Lecture	10
71	Crank Removal & Installation	Demo & Lab	30
72	Three-Piece Cranks	Include as Needed	—
73	Two-Piece Compression Slotted Cranks	Include as Needed	—
74	Two-Piece Cranks Using Wave Washer	Include as Needed	—
74	Two-Piece Self-Extracting Cranks	Include as Needed	—
75	Two-Piece Pre-Load Adjuster Nut Cranks	Include as Needed	—
87	Threaded Bottom Bracket with Two-Piece Cranks	Demo	10
87	Threaded Cartridge Bottom Brackets		
91	Chainrings	Lecture	5
92	Chainring Replacement	Reading	5
92	Chainring Wear and Damage	Lecture	5
<b>TOTAL:</b>			<b>70</b>
<b>Chapter 8: Chains</b>			
8-i	Chapter Overview	Lecture	5
96	Chain Sizing for Derailleur Bikes	Demo & Lab	10
98	Chain Removal	Demo & Lab	10
99	Shimano® and FSA® Chains with Connecting Rivet	Demo & Lab	15
102	Chains with Master Link	Lecture	5
102	Chain with Reusable Rivets	Demo & Lab	10
103	Tight Link Repair		
106	Chain Wear and Damage	Lecture	5
107	Chain Cleaning	Demo	5
107	Chain Lubrication	Demo & Lab	10
<b>TOTAL:</b>			<b>75</b>
<b>Chapter 9: Derailleur Systems</b>			
9-i	Chapter Overview	Lecture	5
110	Cable System	Lecture	5
111	Cable Housing Length and Routing	Lecture	5
112	Shift Levers	Demo	10
116	Front Derailleur	Demo	10
118	Height Adjustment		
119	Rotational Adjustment		
120	Limit Screw Adjustment	Demo & Lab	15
122	Front Index Adjustment	Demo & Lab	10
122	Front Derailleur Performance	Lecture	5
122	Shimano® Front Derailleur FD-9000	Reading	—
124	Rear Derailleur	Lecture	5
124	Derailleur Capacity and Maximum Sprocket Size	Lecture	5
125	Derailleur Installation	Reading	—
125	Derailleur Cable Management	Reading	—
125	Limit Screw Adjustment	Demo & Lab	15
127	B-Screw Adjustment	Demo	5
127	Index Adjustment	Demo & Lab	20

129	Clutch System Rear Derailleurs	Reading	—
129	Chainline	Reading	—
130	Derailleur Hanger Alignment & Repair	Demo	—
132	Derailleur Wear & Service	Reading	—
133	Troubleshooting Derailleur Systems	Reading	—
<b>TOTAL:</b>			<b>115</b>
<b>Chapter 11: Caliper Disc Brake Systems</b>			
11-i	Chapter Overview	Lecture	5
150	Caliper Types	Lecture	5
151	Disc Brake Rotors	Reading	—
152	Hydraulic Brake Levers	Reading	—
152	Hydraulic Disc Calipers	Reading	—
153	Hydraulic Brake Caliper Alignment	Demo (one type)	15
162	Mechanical Disc Brake Systems	Demo & Lab	15
163	Caliper Pad Alignment and Clearance		
164	Avid® Mechanical Disc Brakes		
<b>TOTAL:</b>			<b>40</b>
<b>Chapter 12: Caliper Rim Brake Systems</b>			
12-i	Chapter Overview	Lecture	5
171	Cable System	Lecture	5
172	Cable Lubrication		
172	Cable Housing Length		
173	Caliper Rim Brakes	Demo & Lab	30
174	Brake Pads		
176	Linear-Pull Caliper Adjustment	Include as Needed	—
177	Cantilever Caliper Adjustment	Include as Needed	—
180	Dual-Pivot Caliper Adjustment	Include as Needed	—
181	Side-Pull Caliper Adjustment	Include as Needed	—
<b>TOTAL:</b>			<b>40</b>
<b>Chapter 13: Handlebars, Stems, Saddles, &amp; Seatposts</b>			
13-i	Chapter Overview	Lecture	5
184	Upright Handlebars	Reading	—
185	Drop Style Handlebars (Road Bars)	Reading	—
186	Stems	Lecture	10
186	Quill Stems		
187	Threadless Stems		
188	Saddles	Lecture	10
189	Seatposts		
<b>TOTAL:</b>			<b>25</b>
<b>Chapter 14: Headsets</b>			
14-i	Chapter Overview	Lecture	5
194	Headset Types	Lecture	5
199	Threaded Headset Adjustment	Demo & Lab	15
200	Headset Replacement & Installation	Lecture	10
<b>TOTAL:</b>			<b>35</b>
<b>Chapter 17: On-Ride Repairs</b>			
220	—	Include as Needed	—