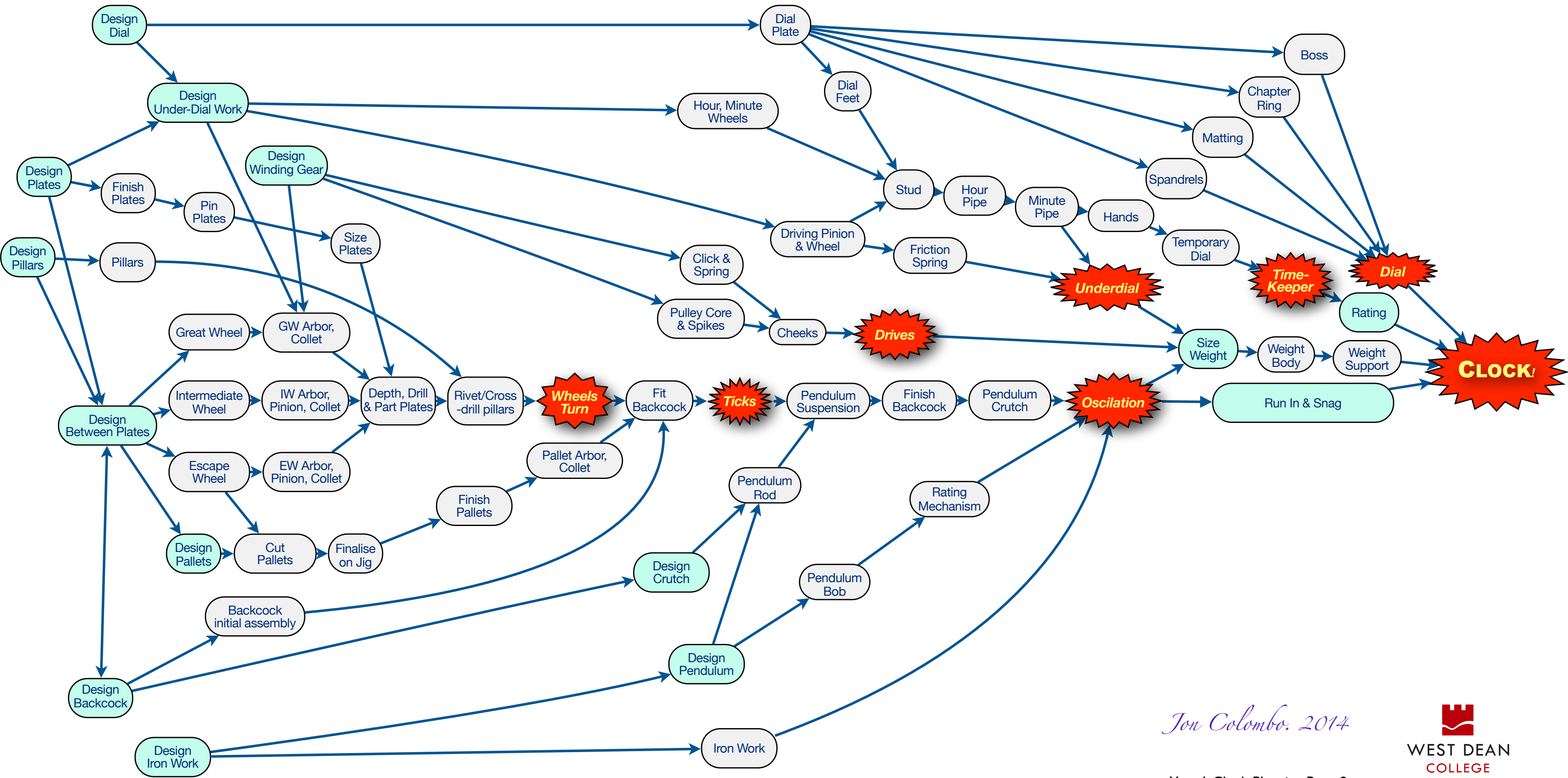


YEAR 1 CLOCK PROJECT PROJECT PLAN

Jon Colombo. June 2014.



Planning: Process Flow



Jon Colombo. 2014



#	Hr	Notes	December	January	February	March	April	May	June	July	
Frame, Initial Construction											
Plates, initial shaping	2.0	78x126mm	c	g g g c							
Design Pillars			c	c							
Pillars	4.0	P2P:38, Rivet: 7	c	g g g c							
Back-Cock Basic Construction		Need to know thickness of the pendulum bob!	c		g c						
Escapement											
Draw Escapement			c	g g g g c							
Practice model		Jig, over-sized wheel, brass pallets.	c	g g g g g	g c						
Fly Cutter		Used for both practice model and real escapement.	c		g g	g e					
Boxwood chuck		Produce ad-hoc for both practice and real wheel.	c			c					
Design Pallet Frame			c		c						
Escmt set up jig (real)			c		c						
Escape Wheel	1.0		c		g	g c					
Pallets	2.0		c								
•Cut/Set up Brass Pallets			c		g	c					
•Cut/Set up Steel Pallets			c			g e c					
Practice Collet		Uses one of the reject wheels from cutting.	c				c				
Esc Wheel arbor	1.0		c				g g c				
Esc Wheel collet	1.0		c				c				
Iron Work											
Design Hoop and Spurs			c		c						
Hoop	1.0	After Back-cock basics	c		g c						
Hoop Screws	2.0	4h	c					c			
Spurs	2.0		c		g c						
Train											
Mandrel		1 day's work	c		g		c				
Design Layout			c			g g g g	g c				
Crossings jig			c				g c				
Design Collets			c				c				
Design Crossings			c				c				
Intermediate Wheel	1.0		c			e					
Inter Wheel Arbor/ Pinion	1.0	After Pillars	c				g e e	g g	c		
Inter Wheel Collet	2.0		c					c			
Mount Interwheel			c					c			
Depthing Theory			c					c			
Great Wheel	1.0		c		g				c		
Design Dial Plate & Furniture		Needed for GW Arbor & UD design	c				g c				
Design UD Wheels		Before great wheel assembly	c					g	c		
Design Grt Wheel arbor			c						c		
Great Wheel Arbor	1.0	After Pillars made and dial designed.	c						c		
Great Wheel Collet	1.0	After design of Ratchet mechanism.	c						c		
Mount Great Wheel			c						c		
Depth Great/Inter		Same time as 'Planting out' escape wheel.	c						c		
Depth Inter/Escapement		Same time as 'Planting out' escape wheel.	c						c		
Planting The Train											
Finishing of Plates		(c 3 hrs)	c					e c			
Mark/Drill Pivot Holes		AFTER all wheels depthed	c					g			
Parting Plates			c						g c		
Riveting exercise			c						c		
Cross Pinning Exercise			c						g c		
Rivet Pillars			c						c		
Cross Drill Pillars			c						c		
Pallet arbor	1.0	After Back-Cock pinned	c							c	

#	Hr	Notes	December	January	February	March	April	May	June	July
Pallet collet	1.0		c				c			
<i>Harden Pallets</i>			c				c			
<i>Pin Back-cock</i>			c					c		
Back-cock Screw	1.0	M4 is ok	c					c		
<i>Planting out' pallets</i>		Same time as Depthing of Wheels.	c					c		
<i>Back-Cock Final Shaping</i>			c					g		
Winding Gear			c							
<i>Design Ratchet method</i>		Has to be done before the great-wheel collet is made.	c							
Pulley Core	1.0		c					c		
Pulley Spikes	6.0		c					c		
Pulley Cheeks	2.0		c					c		
Ratchet Click	1.0		c					g		
Click Spring	1.0		c					c		
Fixings	3.0		c					c		
Pendulum			c							
<i>Design Pendulum</i>		0.25	c							
<i>Design suspension & crutch</i>		Need to be designed together for crutch pin to fit into slot	c							
Rod	1.0		c					c		
Slide	1.0	2h	c					c		
Rating Thread	1.0	1h	c					g		
Rating Nut	1.0	1h 30m	c					c		
Top Blank	1.0	4h	c					c		
Bob Shells	2.0	1h 30m	c					g		
<i>Bob Lead Fill</i>		3	c					g		
Suspension Spring	1.0	1h	c					g		
S/Spring Top Block	1.0	2h	c					g		
<i>Slot Backcock</i>		2h	c					g		
Crutch	1.0	8h	c					g		
Crutch Pin	1.0	3h 30m	c					g		
Crutch Collet	1.0	2h	c					g		
Under Dial Work			c							
Driving Pinion (Brass)	1.0		c					g		
Driving Wheel (Brass)	1.0		c					g		
Driven/Minute Wheel	1.0		c					g		
Driven/Hour wheel	1.0		c					g		
Friction spring	1.0	c h hrs	c					g		
<i>Design Pipes</i>			c					g		
Stud	1.0	After Dial Feet 93hr	c					c		
Cannon (Minute Wheel) pipe	1.0	After Dial Feet, (4hr)	c					c		
Hour wheel pipe	1.0	After Dial Feet, after Cannon pipe (2hr)	c					c		
Hands & Dial Plate			c							
<i>Design Hands</i>	0.1	1	c					g		
Dial Plate	0.5	4	c					c		
Dial Feet	0.5	4 Before Stud and Pipes.	c					c		
Rivet Dial Feet	0.4	3	c					c		
Minute Hand	0.4	3	c					g		
Hour Hand	0.4	3	c					g		
Hour Hand Collet	0.5	4	c					g		
Fixing Spring	0.1	1	c					c		
<i>Blue Hands</i>	0.8	6	c					c		
Temporary Dial	0.5	For accurate rating of the clock	c					c		
Weights			c							
<i>Design Weights</i>	2	After clock is running, need to know optimal weight.								
Weight	8							g		
Weight Hanger	1							g		



WEST DEAN
COLLEGE
YEAR 1 CLOCK PROJECT

JON COLOMBO, JUNE 2014
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