

### Avalon Hill Pro Golf Course Design Tips

Bear in mind that none of these rules are hard and fast. These are just tips to help beginning course designers get off the ground, as these are the rules I followed when designing my first courses.

#### 1. What club to tee off with

Hole length	Club
425+	Driver
424-357	Driver and/or FW layup
356-310	Driver and/or LI Layup
309-281	LI Layup
280-231	FW
230-190	LI
189- 150	MI
150-0	SI

While those ranges aren't perfect, they're close enough. The only place you'll get into trouble is from 300 to 330 yards, where big hitters should be able to reach the green, but aren't allowed to. This keeps the terrible players from getting lucky, rolling an LC and hitting 320 yard drives.

These aren't hard and fast rules, so feel free to make changes, especially if the hole has hard doglegs or requires you to hit certain shorter areas of a hole for best lie. This is simply a guide.

#### 2. Options in the tee box

An easy way to add more involvement and enjoyment to the player is to give them options off the tee box to give players the opportunity to hit shorter, safer shots, or gamble for the big shot!

Say on a hole you give the player the option between a **DRIVER** or a **FW layup**.

If the player chooses DRIVER, there should be stiff penalties for not rolling an MC/LC, such as OB shots (that require a 2-stroke penalty and re-tee), and Trees/Heavy rough that come with a heavy (-#) penalty and an undesirable club choice. Conversely, a good drive should be rewarded with a very low club selection (indicating a shorter shot), and perhaps a small (+1) reward.

If the player goes the FW layup route, the penalties for missing the fairway should be lessened, although the club selection will already be poor for choosing the shorter shot. On the layup, the reward for hitting the fairway should be lessened due to the shortness of the shot, so the club choice should not be desirable, and there may even be some (-#) penalties.

A good rule of thumb is that the best possible layup shot should result in a club choice that is slightly worse than the SC result of a driver.

### 3. How to determine where the ball goes

As you know from playing the game, there are 9 possible outcomes with a driver you need to prepare for: LL, LC, LR, ML, MC, MR, SL, SC, SR.

You know what the abbreviations stand for (Long Left, Mid Center, Short Right, etc).

All the other clubs have 16 possible combinations you need to prepare for, as each two-letter abbreviation is followed by a -C or a -P:

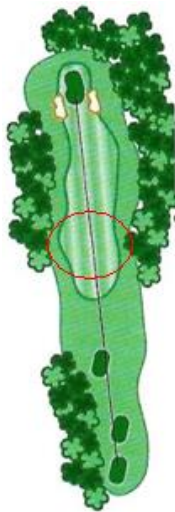
LL-C, LL-P, LC-C, LC-P, LR-C, LR-P, ML-C, ML-P, MR-C, MR-P, SL-C, SL-P, SC-C, SC-P, SR-C, SR-P.

Note that there are 16 because there is no MC-C and no MC-P. Don't forget, there are 3 more options to account for on a layup shot: 0-20, 21-40, 41+

It is acceptable to combine outcomes that have the same end lie and club combination, such as "ML-C, MR-C = Rough, MI (-3)" If the results are the same, you can also lump a bunch of different outcomes into one category called "All other -C" or "All other -P". This is very common once you get into 4<sup>th</sup> shots and beyond. Example: "All other -C = Fringe, CH."

While this applies to all the shots on the course, I'll put this here. I use a bit of a graphical mode to determine where the ball goes, dependant on the length and par of the hole.

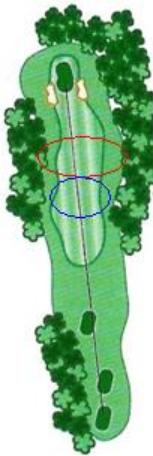
PAR 5s



Pictured is a 578-yard par 5. The only option off the tee is Driver. Most drives go **320-270 yards**, for an average of 295 yards, so 295 is 51% of 578. I put the center of my red circle there, and expand it slightly up and down the fairway. Then because I'm using a driver, I extend it very wide across the hole. There's my landing zone (NOTE: I draw this circle in my mind, not on the actual hole, it's only on the hole to visualize.)

I use that oval to determine where all the shots go. MC = Mid center circle. (fairway) SL = short left part of the circle (rough). To make the holes much more difficult, expand the circle. To make them easier, contract the circle. You make them much more difficult or easy, add secondary roll results. Example: MR = 1-2 Trees, 3-6 Rough (we'll add the (-#) stuff later.) makes the hole harder, and MR = 1-2 Fairway, 3-6 Rough makes it easier.

#### PAR 4s



Now let's say we have the same hole in terms of layout, but this one is much shorter. It's a 409-yard par 4. I'll give the player a choice here of a Driver or a fairway layup... just to make it interesting. Taking what we learned from par 5s, a driver will go on average 295 yards. That's about 72% of the way to the hole. So that's where we'll put our big wide red oval. Excellent.

Now what did we say about layups? That they should be safer, and the best possible layup shot should result in a club choice that is slightly worse than the SC result of a driver. So we use that information to draw our blue oval. The dangers should be lessened, but we're farther away for our second shot.

Remember, on layups you do need to take into account numbered results. These are considered "best shots" and fall into three tiers: 0-20 (BEST), 21-40 (2<sup>nd</sup> best), 41+ (3<sup>rd</sup> best). These shots will often have the same lie, but will differ in the next club and parenthetical adjustment.

#### PAR 3s



Rather than reuse the same stock image a 3<sup>rd</sup> time, pictured is an actual 165-yard par 3, though not a particularly difficult one. Using our charts, we know we tee off with an MI (though we could go SI if the hole is downhill), and we know that any result with a number will put them on the green, and anything else is a miss. So now the only question about the size of the oval is—how much do you want to punish a miss?

In this case, not much. Remember, on non-drive shots the reading ends in -C or -P. -C is ALWAYS closer to the hole than -P.

Here, I would make ALL the -Cs fringes (though to make it a harder hole you could go 1-3 Fringe, 3-4 something else... or even something else entirely)... the LL-P/LC-P/LR-P and ML-P would be rough... the MR-P and SR-P would be sand... the SC-P would be fairway... and after some deliberation, I would make the SL-P 1-3 fairway, 4-6 rough.

Here knowledge of the course really comes into play. Does the left side fall off into a massive ditch? Then maybe I make the ML-C "1-3 Fringe, 4-6 Rough" instead of just fringe.

This par 3 approach is very similar to how you'd tackle any approach to the green, regardless of par. Fringe is a very good standby outcome for -Cs around the green. Not just on par 3s, but on any approach shot to the green. It always results in CH, and is the best outcome you can give that isn't on the green.

#### 4. **Next shot and parenthetic numbers**

We've covered club selection from the tee, and how to determine where the ball ends up. The only thing left to cover is what kind of club to make the player choose for the next shot. That is determined primarily distance from the hole, and lie.

#### **LAYUP vs NO LAYUP**

There's a really easy determiner for when to use a layup and when not to use a layup on a shot other than the tee shot. Ask yourself two questions:

1. Is this hole a par 5?
2. Do I only want long hitters to reach the green in two, or do I want nobody to reach the green in two shots?

If the answer to both these questions is yes, there needs to be a layup shot option for the second shot, and if you don't want anyone to reach the green in two, the layup option needs to be the only option.

Remember, going for the green on the second shot of a par 5 should only be reserved for those big hitters who really crushed their first shot into the fairway. I generally force everyone to lay up unless their tee shot was an LC, or the hole is a short par 5. Since going for the green in two should present more risks than laying up, if the player qualifies to reach the green in two, I like to present an option to the player of going for it OR laying up. Something like "FW or MI Layup"

If a player is going for the green in two, I adjust my targeting system (red and blue circles from the example) so that long shots are penalized by fringe at worst. Since it took all the club they had just to get there, it seems unrealistic that they would fly the green and go into the rough. If that was the case, enough people would be going for the green that there's really no need for a layup.

Remember, the best layup shots should be just worse than the SC non-layup shots.

#### **CLUB SELECTION**

To know which club to select for a given distance, you need to know how far the tee shot went. Again, the average with a driver is 295 yards, so we assume an MC drive went 295 yards. Subtract that from the hole length, and you know how far you need to go.

If the shot went LC, we assume it went to the high end of our drive scale, or around 320 yards. SC went to the low end of the scale, roughly 270. I penalize left and right shots a little bit more, so perhaps that SR only went 250. It's up to your interpretation.

So once you know how much hole is left, figure out the appropriate club if the player is going for the green on this shot. Layups after the tee shot are described after the rubric.

Again, the rubric below is open to interpretation, and elevation plays a tremendous effect. Uphill holes play longer, downhill holes play much shorter. Keep that in mind when designing these holes. Example: an uphill 170-yard shot warrants a LI, while a downhill 170-yard shot will take a MI. This is where course knowledge certainly comes into play.

Distance remaining to hole	Club
220+	FW
219-170	LI
169-130	MI
129-100	SI
99-30	P
<29	CH

If you're laying up to a hole instead of going for the green, go down one club length from whatever you would use to go for the green (like from FW to LI). They can't reach the green anyway. Only use the SD club if the player has hit into a greenside bunker. If you find yourself in any other bunker, use the appropriate club for the distance, with a heavy parenthetical penalty.

#### ADJUSTING PARENTHETIC NUMBERS

What is this parenthetical number I keep referring to? It's the number in parenthesis after a club type. It's the "(-1)" in "FW (-1)". There are three reasons to have a parenthetical number:

1. To more accurately reflect the difficulty of the hole
2. To reflect that the ball is in a tough spot (rough, some sand, heavy rough, trees, or tall grass)
3. When a player has options in club outside of the tee box, to balance out the options.

I'll address difficulty first.

Let's say that the ball got hit to around 98 yards on a hole that has a very small, undulating green. 98 calls for a P, but because the green is hard to hit, you add a modifier of (-1) to it, worsening the result. I generally don't like to go any further than (-2) in the fairway.

This doesn't just apply to shots at the green, it applies to layup shots as well, if they're laying up to a particularly narrow or treacherous part of the fairway.

Now to address the ball being in a difficult spot. There are times when a ball's lie isn't on the fairway, green or fringe, making it extra difficult to get a good shot off. I use the rubric on the next page to determine how much of a penalty to assess:

Problem lie (general location)	Penalty
Light rough (around green) Easy to normal bunkers (around green)	none
Normal / medium difficulty bunkers (around green) Moderate rough (around green)	(-1)
Difficult bunkers (around green) Heavy rough (around green) Light rough (far from green) Tall grass (around green)	(-2)
Moderate to Difficult rough (far from green) Tall grass (far from green) Most difficult bunkers (around green) Trees (around green)	(-3)
Bunkers (far from green) VERY Heavy rough (far from green) Trees (far from green)	(-4)

The third and final reason for having a parenthetical number is a fun one. Remember how we sometimes give the player options from the teebox to give them a fun choice? You can give them a similar fun choice outside of the teebox as well.

On some holes and lies, you can determine the club used for the next shot like normal, but then give them the choice to hit that club, or hit a lower club with a high penalty (generally -4 to -6). Here's an example:

A player is in the fairway, 135 yards from the hole. This calls for a MI... but what if you up the stakes a bit by giving them the option to hit SI (-5) instead? The "Next shot uses" reads: MI or SI (-5). The player gets to study the two columns on their player card, and determine if the benefit of hitting SI is worth the (-5) risk.

I try not to overdue the options for the player, limiting them to generally one situation per hole, but having this allows the player to use strategy without all the wacky optional gambling rules.

Once you have the parenthetical number, (if you have a parenthetical number), you just tack that on after the club type (but before any layup), and your "Next Shot Uses" column is finished.

What determines light rough from moderate rough? What about a difficult bunker from a medium difficulty bunker? That's up to you. Determine that through your own personal experiences and observations, coupled with how difficult you want the hole to play.

So let's say a player's second shot is going to be 150 yards from the pin, hitting from some difficult rough. Anyone can reach the green, so there's no layup. The 150 yards says we should use a MI, and the difficult rough that isn't near the green says (-3), so our "next shot uses" will be: MI (-3)

## 5. Hazards

I think we've covered everything but hazards. As you know, there are two specific types of hazard: out of bounds and water.

Out of bounds is easy. You assess a two-stroke penalty, then re-hit from the last play you hit from (similar to rolling an S in the sand category and not making it out of the bunker). I tend to only make out-of-bounds an option on tee shots, and unless you're making a particularly nasty difficult hole, I tie it to a secondary roll, as in "SL = 1 – OB, 2-6 – Rough" Out of bounds is nasty, and ruins games quickly, so be careful how you use it.

Water is a little more difficult—even though it's just a 1-shot penalty—because you have to know where the drop zones are to assign the proper distance for the next shot after finding the drink. Most shots from drop zones have high parenthetical penalties (like -3) to help double-down the direness of the situation. I'm not as much of a stickler for tying water to secondary roles as I am for OB. It doesn't hurt as much, and hey, if you miss an island green short, you're going to make a splash.

## 6. Layout

Everyone is particular about the layout of their course book. This is just how I do mine. I use Microsoft Excel and do 2 holes per page, one high and one low. Where can you get course layout images? Good question. Usually you can find those at the course website... but if you can't find it there, try going to <http://course.bluegolf.com/>, find your course, and select the course tour. You can take screenshots there (print screen), edit them in a program like paint, then paste the result into your spreadsheet. I've also used google maps to the same end, though you need to have familiarity with the holes.

## 7. Final thoughts

Have fun, and use your personal experience to mold the end product! The next page is a cheat sheet of the charts I use, and the page after that has I've attached a sample hole so you can test what you've learned. (My solution is on the final page)

### CHARTS

Hole length	Club
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Problem lie (general location)	Penalty
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Bunkers (far from green) Heavy rough (far from green) Trees (far from green)	(-4)



### Try it for yourself

This hole is a 536-yard par 4 off an elevated tee box. A wide fairway forms a gentle double dogleg, first left and then right. A series of pot bunkers lines the final 40 yards on the right to the back of the elevated green. Longer hitters can probably drive it over the fairway bunker on the left.

This hole is on a course that PGA professionals have played, and does present a fair amount of challenge.

Show me what you'd do for tee box club selection all the way through to "Additional shots". My answers are on the next page.



## My solution:



<b>Tee:</b>	<b>DRIVER</b>					
<b>2nd shot:</b>				<b>3rd shot (no layup)</b>		
<b>Tee Shot</b>	<b>Result</b>	<b>2nd Shot Uses</b>		<b>2nd Shot</b>	<b>Result</b>	<b>3rd Shot Uses</b>
SL, SR	1-3 Fairway	FW Layup		SC-P, SC-C	Fairway	P
	4-6 Rough	FW (-1) Layup		SL-C, SR-C	Fairway	P
SC	Fairway	FW Layup		SL-P	Rough	P (-1)
ML, MR	Fairway	FW (-2)		SR-P	1-3 Rough	P (-1)
MC	Fairway	FW (-2)			4-6 Sand	SD (-1)
LL	1-2 Fairway	LI		ML-C, MR-C	Fairway	CH (-1)
	3-4 Sand	MI Layup		ML-P, MR-P	1-4 Rough	CH (-2)
	5-6 Rough	LI (-2)			5-6 Sand	SD (-1)
LC	Fairway	LI		LL-P, LR-P	Rough	CH (-1)
LR	1-4 Fairway	LI (-1)		LL-P	Rough	CH (-1)
	5-6 Rough	LI (-2)		All other -C	Fringe	CH
<b>3rd shot (after layup)</b>				<b>4th and additional shots</b>		
<b>2nd Shot</b>	<b>Result</b>	<b>3rd Shot Uses</b>		<b>3rd Shot</b>	<b>Result</b>	<b>4th shot uses</b>
SL-P	Rough	P (-3)		All other -P	Rough	P
SR-P	1-3 Rough	P (-3)		All other -C	Fringe	CH
	4-6 Sand	SD (-2)				
SC-P, SC-C	Fairway	P (-2)				
SL-C, SR-C	Fairway	P (-2)				
ML-C, MR-C	Fairway	P				
ML-P	Rough	P (-1)				
MR-P	1-3 Fairway	P				
	4-6 Rough	P (-1)				
LL-P, LR-P	Rough	CH (-1)				
LL-C, LR-C	Fairway	CH				
LC-C, LC-P	Fairway	CH				
0-41+	Fairway	CH (+1)				

My rubric told me that this distance called for a Driver, so I went with that. First, I built out the “2<sup>nd</sup> shot”, using the logic that an MC shot would be 241 yards from the hole (536-295). I made it (-2) so that an average drive wouldn’t allow an eagle opportunity. You’ll notice that short drives lose the ability to reach the green in two.

From there we have a layup and a non-layup option route, depending on the length of the original shot. The layup route cannot reach the green, but the shorter shot lends itself to more accuracy and fewer hazards.

Your solution may vary. Have fun! Hope this helped!

- Mike Tingle (MTingle@gmail.com)