



An HJS Studio Tutorial:

Design Your Own Knitting Patterns



When I'd been knitting maybe three years, back in about 1981, I visited a knitting store in Maryland, I forget what town, and asked if they had classes on designing your own knitting patterns. The woman looked at me with incredulity and said that designing your own was really hard to do, and no, they didn't have classes on it. I didn't sign up for any of their classes.

A little later I found a Penguin yarn store in the local mall—unheard of today, and maybe I was luckier then than I realized. It became my home away from home. I signed up for a class that I don't remember the name of, but it was a sort of drop in and get help figuring out the projects you want to make. Although they sold magazine-style books of knitting patterns (and I still have several of baby patterns), they didn't push a customer toward following their patterns. I was able to choose ideas and work through them with their more experienced help.

And what I essentially realized is that I already had all the skills I needed, thanks to two serendipitous circumstances: I had encountered Knitting Without Tears by Elizabeth Zimmerman in my first year of knitting, and I had begun knitting in Germany, where in common with other western European countries (but uncommon in the US), knitting patterns in books and magazines provided a diagram of the project parts, with measurements. Between these two helps, I realized that anyone can design a project. All you need are good measurements and a good gauge swatch. Really! Whether you want to make a sweater, a tote bag, a blanket, or whatever you can imagine, just think about the shape of the item, sketch it on paper, figure out your measurements, swatch, and away you go!

OK, so maybe it's a little more involved than that :) But truly, not very much. This article will provide the general process of designing a knit project, along with a few tips I've picked up along the years. I hope it will help free you, as it has me, from the tyranny of commercial patterns.

First step

It may seem too obvious for words, but first you have to have an idea for what you want to knit! Will it be a garment? For whom? An accessory? Something else? For the life of me, I can't think of anything to knit that's not a garment or an accessory—even a rug is a home accessory!

Sketch your idea on paper. Don't worry about it looking like a designer's sketch as occasionally shown in knitting magazines. Just scribble and brainstorm on paper, without bothering about details just yet. I frequently use catalogs and magazines and websites, as well as the work of my friends, for inspiration—without, of course, ever copying any of it. It's like making



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a soup—every time you put in the same batch of ingredients you think of something new and different to 'spice it up' and make it unique.

Step 2: Refine your idea

Now you need to pick and choose. Don't make your early projects too complex and fancy. Stick with what's familiar in yarn, stitch pattern, and overall shape. A drop-shouldered sweater will be easier to design than one with set-in sleeves, for example. A seamless sweater easier than one that opens in front asymmetrically. Don't worry, down the road you'll be able to tackle the latter, but don't make your first attempts too difficult or you might discourage yourself unnecessarily.

Step 3: What kind of yarn to use?

Time to start thinking about your yarn. Basically, any textile project has elements of color, texture, and pattern (repeating texture). It's easiest to have just one of those stand out in the beginning. Will your pattern be stockinette or garter stitch? Then you can let the color shine out or the texture of the yarn dominate. If your color is quite variable, then pattern will be lost and texture will be obscured, so simplify those. And if the yarn is highly textured—lumpy-bumpy or very fluffy, for example—then you need the color and stitch of your project to be simple.

If you're spinning the yarn, stay with safe and familiar and easy to spin for the first project. Unless, perhaps, the project is very small and easy to knit; then you could 'splurge' on fancier yarn.

If you're planning to buy your yarn, one that you've used before, liked, and are familiar with will make your first design more enjoyable to work with.

Whether handspun or purchased, make sure the characteristics of the yarn are suitable in weight, fiber type, and general quality, too. Don't choose fluffy angora or brushed mohair for baby wear, for example. Don't choose a heavy-weight yarn for a summer camisole. Choose a machine-washable fiber for a child's sweater—unless you want the mom to store it away unused!

Step 4: Measurements

How large should the finished item be? If you're planning to knit a garment, try to measure one that fits comfortably and measure it, as it will already have body size plus wearing ease figured out. I often use patterns from books and magazines in a style somewhat like what I'm interested in knitting to give me sizing information, if a garment is not available to measure. Other items are pretty easy to figure out. Want a tote bag, or blanket, or scarf, or bottle carrier? Measure or choose the size you want to make.

Make a more accurate sketch now of your project idea, and add measurements you've figured out—inches or centimeters for now, we'll figure out the numbers of stitches in Step 6.



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Step 5: Gauge swatch

I hope you didn't really think you could get away without doing a gauge swatch? If you're very sure of the gauge, pattern stitch, and needle size that works with the yarn you have in mind, then perhaps you can skip the swatch. But if you're going to try a slightly different stitch, like using fair isle instead of stockinette, or a different needle size to make the knit fabric denser or looser than usual, then a gauge swatch is probably obligatory.

Keep in mind that you can keep your swatch in a design notebook, or just loose in a box, for future reference, so it's not a waste of time beyond this project. After all, someday you may be teaching, and it's great to have a pile of swatches to illustrate principles of designing to your students!

Also keep in mind that too small a swatch is almost worse than none at all. Cast on enough stitches to test at least two full repeats of stitch patterns, or at least four inches / 10 cm in width, and knit at least two full repeats of the pattern rows, or at least another five inches / 13 cm in length. I know that sounds like a lot, but it's the only way you can be sure your hands have fully relaxed into the knitting and so will knit like your bigger project will be done. Trust me, a smaller swatch will lead to a finished project that isn't the size you thought it would be!

If you're planning to knit your project back and forth, then swatch that way, and a scarf makes a great usable 'swatch'; if circular knitting is in your future plans, then be sure to swatch in rounds (a water bottle carrier makes a fun, relatively fast, swatch for circular knitting). Most knitters find their back-and-forth knitting sizes a little differently from their circular knitting.

And of course, swatch the stitch you plan to use. Each knitting stitch 'eats' yarn at a slightly different rate. If you're planning various areas of different stitches, swatch each in a long strip. It's not a great idea early in your designing career to use lots of different stitches unless your project is something very simple like a scarf, but it's a good tip for later on when you're more skilled.

After casting off (nice and loose!) your swatch, treat it like you plan to treat your finished project: wash and let dry flat, wash and block to dry, wash and press to dry, etc. I block lace items but not anything else—too much bother for me. But I know many people strongly advocate blocking everything—if you're one of those folks, then block your swatch as you will your finished item.

Finally, measure the number of stitches and rows per four inches / 10 cm. Count fractions of a stitch and row as well as whole stitches / rows. Yes, it will make a difference in many finished projects—in the amount of yarn you need to buy or spin as well as the size of the project.

Step 6: Figuring out the number of stitches

Finally we get to the fun stuff, actually writing your pattern! Start by multiplying your gauge by the size of the finished project. In imperial measurements, it's easiest to multiply the number of inches by the stitches per inch (divide your 4-inch gauge number by 4 to figure the stitches per inch). In metric, work with the number of stitches per 10 cm, but divide the



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total centimeters of the project size by 10 before you multiply by your gauge. For example, if your project will be 80 cm wide, divide by 10 cm to get 8 cm, then multiply by your stitches per 10 cm to get the number to work with.

Now you need to round up or down a bit to accommodate the stitch pattern repeat, if you're using something more complex than garter stitch or stockinette. Even ribbing: a knit 1, purl 1 ribbing means the number of stitches should be a multiple of two. A small amount of rounding up or down won't affect the size of your finished project much. The larger the stitch repeat, the more the impact. Patterns with smaller stitch repeats are probably best in the beginning.

If you're going to be knitting flat and seaming your item, add two stitches to the total to be your selvage stitches—then knit them in garter or slip each first stitch per row to make a lovely edge for sewing up. Ditto for edges you plan to pick up stitches along later on—add one stitch to your total for each such edge. And if you're planning to cut your work for armholes or center front opening, etc, then add three stitches for each cut planned in a given piece of knitting: you'll stitch along two columns of stitches, while using the center column as your cutting line.

So, going back to your sketch with measurements in inches / cm on it, now note the number of stitches, and if important, rows on your sketch. You're well on your way to writing your pattern!

Step 7: Writing a pattern

Now you might feel comfortable working from the sketch, especially for small projects without much shaping detail. If so, go for it! But be sure to keep notes as you knit. I know, if you didn't like swatching you probably don't like notetaking either :) I understand, but have found through painful experience that it's necessary. Life often happens, getting in the way of finishing a project as quickly as I think I will. By the time I get back to it, I am often clueless about number of stitches, the stitch pattern, sometimes even basic construction details. Write 'em down while they're fresh! Keep the paper with your project. For a simple page to print and fill out for your project, see my Forms page. Let me know if you think it needs changes to be more useful.

You can also write a pattern in the standard kind of format that patterns usually are these days. You know, gauge and needle size, yarn requirements, exact pattern stitch, cast on X number of stitches and work for Y rows, etc. This style leaves little room for imagination or confusion.

Or you can use a narrative style of writing, like Elizabeth Zimmerman often used, especially in her book Knitter's Almanac. This style leaves more up to the judgment of the knitter, and can work well for those who are just beginning to explore their design ability. It can almost read like a journal of design, and be fascinating for other knitters, perhaps even future generations. Best of all, it can record the whys of your design decisions, allowing you more flexibility in the future when you want to tweak your pattern.



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Step 8: Start knitting!

Yes, you're ready to start knitting (if you haven't already :) Take notes as you go, especially those design changes you make as you work. Don't be too ready to rip out knitting that doesn't do quite what you have in mind—can you turn this design challenge into a design element? Get those creative juices flowing, ask the opinions of other knitters, and see what you can accomplish!

I made armholes on a sweater much too deep one time, which I didn't realize until after the entire body was finished. I picked up stitches along the base of the opening, knitting back and forth until I reached a better depth, then picked up stitches all around the opening and knit the sleeves downward as originally planned. The wedge-shaped piece of knitting was fast and easy to do (well, OK, I did rip and reknit the first one a couple times before I was happy :) and added a neat detail in an area that normally doesn't get much attention. Not that I go around waving my arms in the air to show it off, you understand!

In fact, you should expect to make changes as you go along. You're not following a tested pattern, you're making up a unique item from scratch! Allow yourself to experiment, make mistakes, and experiment some more. Allow yourself to enjoy the process as well as the product. After all, knitting takes lots of time, right? You wouldn't be doing it unless there was something in that time that you enjoyed more than going to Wal-mart to buy an equivalent item off the shelf.

Step 9: Critique

I find it important to step back and take a good look at my project after it's completed. Sometimes it might take a while. If I first feel disappointed, and conversely, if I'm very pleased with the results, I might have to wait to gain objectivity toward my work. That's perfectly OK, but when you're ready, do look at your project with—I was going to say "critical", but that's really not a good choice of words—impartial eyes. Pretend someone else made it. What do you like? What do you not like? What would you do differently if you made it again? Remember the three design elements of color, texture, and pattern. Would you change any of those to improve your work? What have you learned from this particular project's process and product? To put it another way: If you were going to tell another knitter how to make this project, what would you warn her about?

I've never made a project where I couldn't think of something I would change if I made it again. Not just a matter of a different colorway, but changes regarding structure or size or pattern. And that's OK! I learn a little about design, about the mechanics of knitting, and about my personal preferences, with each and every project. Talk about life-long learning! And it costs only time and yarn—which you'd be spending anyway, if you followed a commercial pattern. Wow!

Step 10: Start making up your next pattern!

Now put your skills together with a new project idea, and start the whole process over again :) You might like to start creating a design notebook. I have a cheap spiral-bound notebook that I keep handy when looking through catalogs and books. I write down ideas that occur, sketch shapes I like, note colorways that appeal, chart knitting stitches, etc. I can also tape yarn samples and wrappers in there, to record yarns I've used.



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Because I can't rearrange the pages, it's a bit unorganized and cluttered, but that means that every time I look through it to find something, I'm reminded of lots of stuff along the way—rather like it used to be looking through a library's card catalog of books. Remember how you used to find all kinds of neat things on your way to a particular author or subject or title? I miss those! But, for knitting, I have the equivalent in my notebook.

I sincerely hope you feel inspired to try writing your own patterns now. Free yourself from patterns that are unclear (unless you wrote it that way :) or actually have mistakes. I know some knitters are afraid even to substitute a different yarn for that called for in a pattern. Dare! Consider it your first step to design freedom!



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