

Fighting Jacket workshop July 11-12  
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The purpose of this workshop is to create rapier combat legal doublets in styles appropriate to 16th century Western Europe. Pattern fitting, construction, decoration, and finishing will be covered as time permits.

Introduction:

When we use period rapier manuals to try to reproduce the iconic look, we have 2 options: Fence naked or wear a doublet. We are going to explore the latter.

The doublet is often seen starting in the 1400's and fitted jackets continued to be in fashion until the early 1900s. Decoration, fit, and shape varied widely during this timeframe, but one thing remained certain: most of Europe was wearing them. To the horror of some, women were also wearing jackets and doublets by the late 16th century.

Here are some picture examples of doublets from various parts of Europe. Note how the basic style stays the same, but details vary.



English  
1570-1600

1560s German Doublet and Pluderhose



93. Black pluderhose gold and yellow threads in a simile page 57) by Peter

German 1560 +1573



Italian 1570



Italian



English



Italian



Spanish



## Materials:

2.5-3.0 yards of 45" or 2 yards 60" wide material for the decorative outer layer. Fabrics: heavy linen, woven wool, some upholstery/jacards, sturdy cotton or linen blends, strong weave silk (ex. dupioni). If it is shiny, looks like a couch, has glue on the back, or feels sticky, scratchy, or gross when either side is laid against your skin, you do not want that fabric! If it stretches, is slippery, or frays in your hands, it will be a pain to work with—let the buyer beware. Buy 1-2 yards extra if you would like to make a matching coif to cover your mask, to have patterned fabric run a single direction, or for accent trim on other clothing. Wash and iron before use.

2.5-3.0 yards of 45" or 2 yards 60" wide material for lining. Natural fabrics are very good choices as they will wick sweat and be comfortable against your skin. Lining fabric should be sufficiently heavy that pairing with the outer fabric will pass a Society drop test for puncture resistance. Details can be found in Appendix 3 of the [Society Rapier Marshal's Handbook](#). A common fabric choice is a known as Trigger Cloth. It is thin cotton poplin where you can see light through the weave. 4 layers of this is a known standard for puncture resistance. A light outer material can require a heavier material or two layers for the lining. Don't forget that clothing worn under the jacket, such as a shirt, will also count towards this equivalency. Wash and iron before use.

Old t-shirt (optional). The quickest and easiest way to get the basic shape of your pattern is to sacrifice an old t-shirt. Bring one that fits snugly without stretching. Be sure you aren't attached to it as it will be cut to pieces.

2 yards fitting material. This is material we use to 'drape' and fit the pattern to you. It should have the same amount of stretch as your outer fabric. Your lining material can be used for this as the process can potentially create a workable lining. However, this is not guaranteed and a cheap, low-grade fabric is recommended instead.

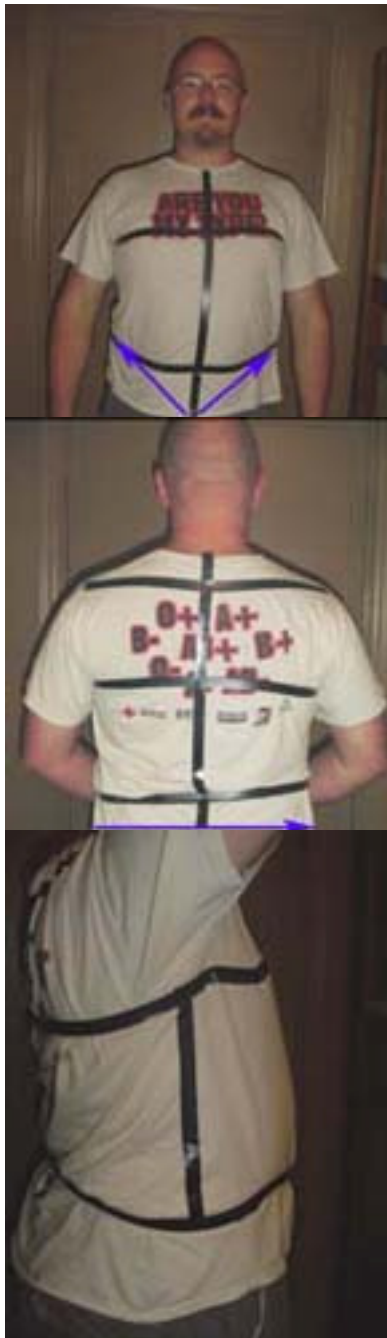
Closures. Some options include 12x 1" buttons (wooden beads, hand-sewn fabric buttons, metal shank buttons, pearl-oid plastic shank buttons, etc), 15-20 ½" buttons, or straight frogs (not the cloverleaf pattern). Button loops, ties, wire hook and eye, or delicate buttons are not recommended due to the heavy stresses of fighting and ease of wear. Zippers and Velcro are not recommended as I will slap you.

Finishing: Period doublets often had some form of trim, piping, tape, or braid. This is how to get a finished, snazzy look. Try to pick something that looks woven, embroidered, or braided/corded/plaited that looks like it could be made with silk, wool, linen or gold/silver thread. Lace can be used but is more likely to appear on undergarments. If you still want lace, stick with pointy, knotted looking lace in bright white, pure black or bright colors. You will need 20 yards for a complete treatment. A minimal treatment will need 10 yards. Bias tape can also be made from 3" wide linen strips for very cheap; yes, I can show you how.

Sewing supplies: You will at least need thread that matches your outer material and a printed copy of the final handout. If you have them, also bring cloth scissors, pinking shears, soft measuring tapes, pins, sewing machines, sewing machine needles, hand-sewing needles, chalk/tailoring pencils, pens to take notes, irons & ironing boards, and bribes for the host.

## Drafting your pattern:

1. Put on whatever you plan on wearing under doublet.
2. Decide where the bottom of the doublet should fall. For women you will probably use your natural waist. To find this, bend sideways and look for where your skin folds. Men usually prefer just above the top of the hip and under the belly. You can always adjust during the fitting period. Also decide if you want the front to be straight across or pointed for the measurement.
3. Never measure on yourself. The subject should flex, take deep breaths, roll their shoulders back, and stand up straight. Always measure twice, re-check placement, and don't run with scissors. Take measurements for:

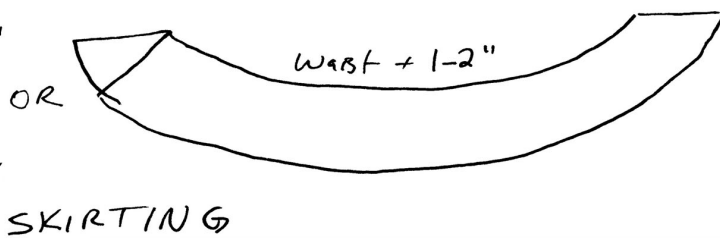
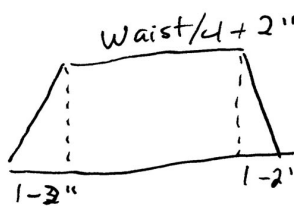
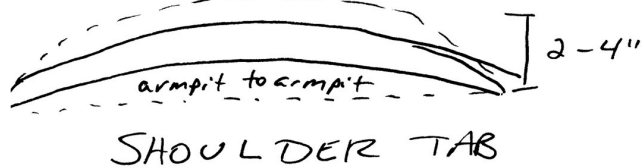
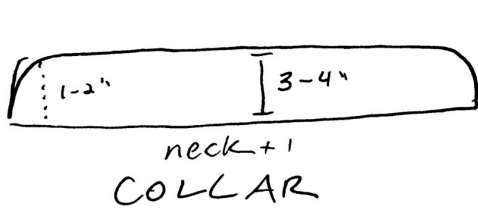
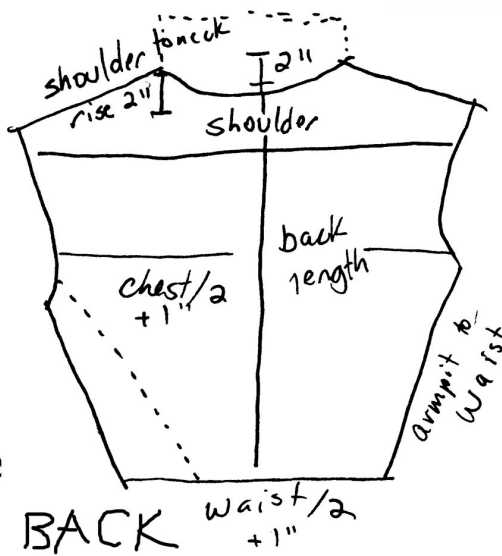
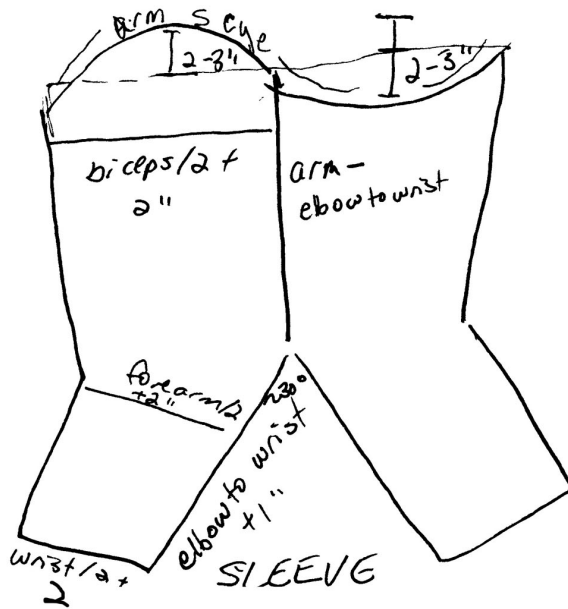
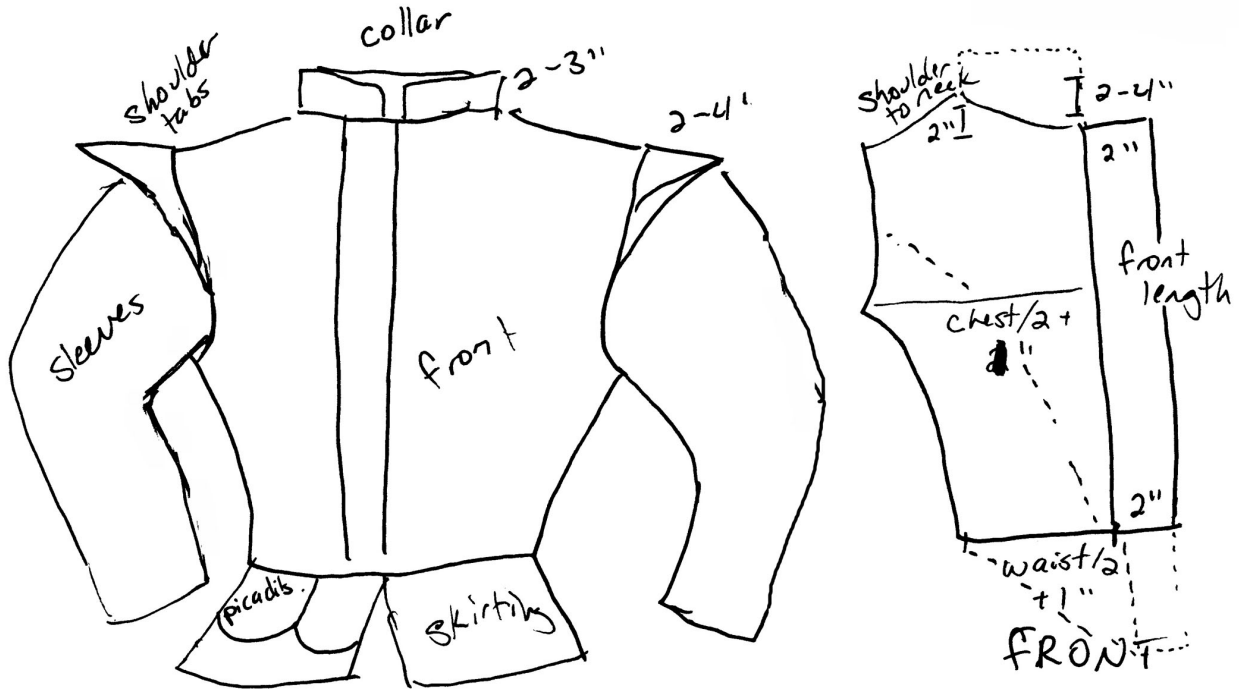


- Chest just under the armpits
- Natural waist (bottom of jacket--do not follow curves)
- Largest circumference of torso
- Top of shoulder to top of shoulder
- Shoulder to neck
- Front: throat to chest
- Front: throat to largest circumference
- Front: throat to waist
- Back length
- armpit to waist
- arm length
- elbow to wrist
- around the bicep
- around the forearm
- around the wrist
- arm scye (the circumference of the shoulder at the armpit, aka "armpit hole"; taken from the fitted garment rather than the person.)



Natural Waist

4. Create a back, front, and side (optional). Seams and extra room for fitting are included.

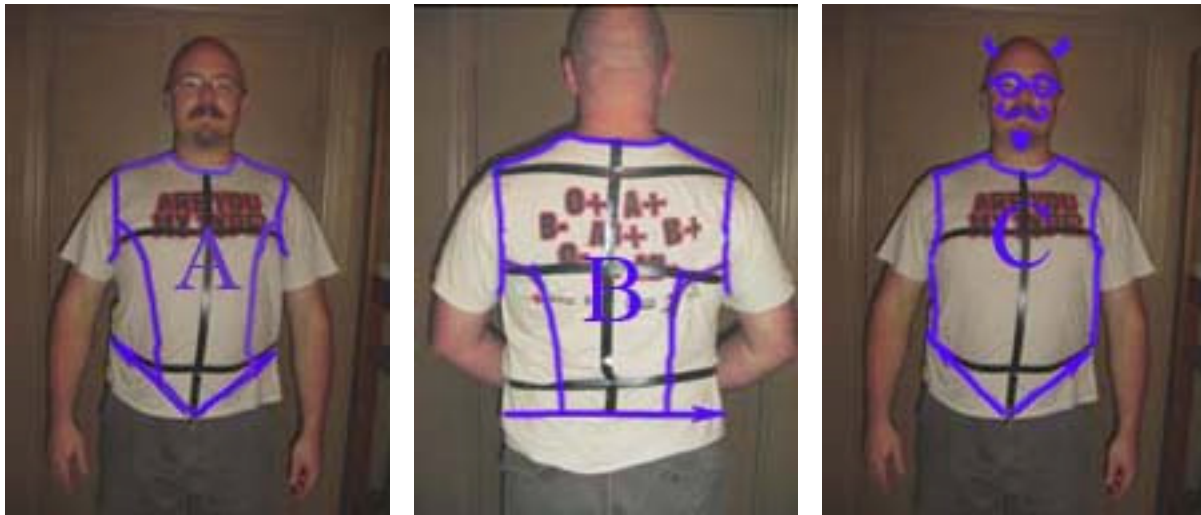


## Patterning from a T-shirt:

1. Put on any shirt or underclothing that you plan on normally wearing under the doublet.
2. Put your pattern t-shirt on over that and check for stretching. Modern t-shirt material often has some flex and a tight fitting shirt will distort the final pattern.
3. Use a marker or tailor's chalk to draw the seams of the doublet. These should be:
  - a. Front of armpit, over the nipple, and ending at the center point between navel and hips.
  - b. On the back from the bottom of the shoulder blade down to the center of the back between spine and hip.

OR: c. From the armpit to the waist at the center of torso. (Use this variation instead of A&B for eliminating the side piece.)

  - d. Find the natural waist by bending to side and noting where fold occurs. Draw a line at the natural waist along back and both sides. You may choose to drop the waist for aesthetic reasons. In particular, men's doublets usually end at the bottom of the belly. The waist line can either continue straight across at the front for or drop down to create a point.



4. T-shirts are built to a generic standard and often have excess material. Some basic fitting can be done at this point by looking for areas of loose fabric. Tighten the fit by folding the material along your desired seam lines and pin it in place. The fit should be comfortably snug without stretching the fabric.
5. Remove the shirt and cut it directly up the center of the front. Also cut along the extant seams at the armpits and on the top of the shoulder. Then cut out the seams that you marked.
6. Transfer the basic pattern to the fitting material. You will want to add 1" around all sides for seam allowance and additional fitting. You will also want to add an extra 1-2" to both front chest pieces along the closure line. This will create an overlap for mounting buttons and giving additional closure.



## Fitting:

Baste (use largest stitch setting) body pieces together. Put on with seams on outside and pin closed down the front.

Potential problems are noted with arrows in the picture to the left.

1. Cut shoulders so that it doesn't bind (bunching up or prohibiting motion) when the arm is moved in any direction and so the top is at the point of the shoulder.

2. Cut the neckline so that it doesn't bind at the neck. Just check fit if you are using a built-in collar.

3. Fabric bunching up or drooping indicates that the doublet needs to be taken in. Pin at the seams to take in extra fabric. If only one of the pieces along a seam needs to be taken in, use a seam ripper to remove the seam and then pin in place.

4. (Not shown) If it is the fit too tight, cut the necessary pieces out again and add more fabric where needed.



Once body is fitted, take the arm scye measurement. Instructions for drafting the sleeve are on the next page. Baste on sleeve, cutting sleeve or body as needed to match in size.

Adjust the fit of sleeve. Be sure to move arm around to check for binding.

Mark all seams with chalk/pencil.



Final fit

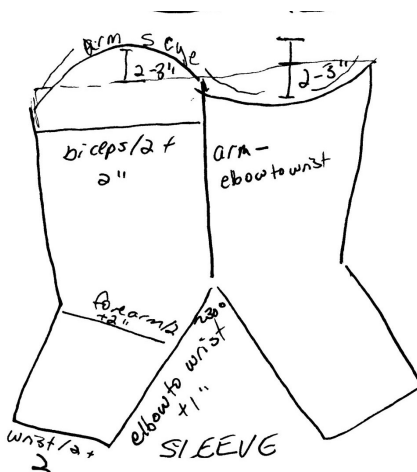
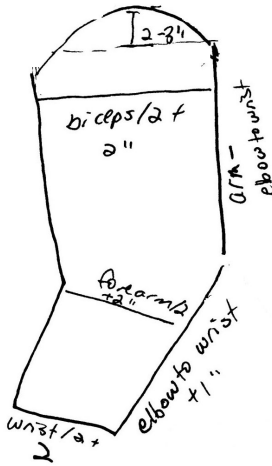
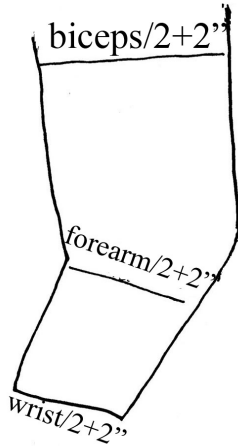
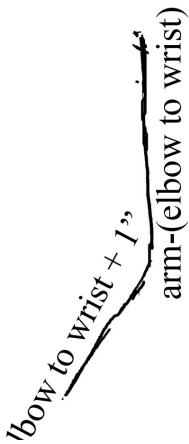
Remove basting and trim the pieces to form a uniform seam allowance at all seams. Trace these patterns onto paper. Mark them with the date, the person it is for, the name of the piece and what type of garment. Save these for future use.



Final fit with sleeve



## Drafting a Sleeve:



1. Draw a line down the center of a 3'x3' piece of paper. Leave yourself 6" at the top and mark the length of your arm minus the distance from the elbow to your wrist.
2. At a 15 degree angle from your vertical, draw a line the distance from your elbow to wrist plus 1". This angle reflects the natural bend in your arm when relaxed. The extra length is for hemming the sleeve.
3. 3" from the top of your vertical line, draw a perpendicular line the width of your arm at the bicep divided by 2. Add 2" for seam allowance and extra room to bend. Add more if you desire a poofier sleeve.
4. 3" down from the elbow bend, draw a perpendicular line the width of your forearm divided by 2 plus 2". Add more if you desire a poofier sleeve.
5. At the bottom of the sleeve, draw a perpendicular line the width of your wrist divided by 2 plus 2". Do not add more width to the wrist as it will not fit well for fighting and doublets are generally fitted at the wrist.
6. Draw a line connecting the ends of lines 3-5 to create the left side of the sleeve. Extend the line 3" past the bicep line.
7. Draw a line perpendicular to the top of the sleeve. Measure 2-3" up from the center point. Draw a curve that connects to the top of the 2 vertical lines.
8. Mirror the sleeve along the first vertical line. The easiest way to do this is to fold the paper along this line; marked on the diagram as "arm-elbow to wrist". You can either trace the other side if the paper is thin enough or cut along the rest of the sleeve. If you choose to cut the sleeve out at this point, leave extra room at the top for later modifications.
9. The top of the sleeve on the right will need to curve down instead of up. This is because this half of the sleeve will rest under the arm. Measure 2-3" down from the center of the sleeve. Draw a curve connecting the top of the side lines through this point.
10. Measure the arm scye for the fitted garment. This measurement will need to match the top edge of your sleeve. Use soft tape to measure the top of your pattern.
  11. If the sleeve top is smaller than the measured arm scye, you can increase it by:
    - a) Increasing the vertical distance of your curve (raising the peak and lowering the crest)
    - b) If you have more than a 4" difference, you will need to expand the upper width of the sleeve.
  - If the sleeve top is larger than the measured arm scye, you can decrease it by:
    - a) Decreasing the vertical distance of your curve to no less than 2"
    - b) Decreasing the width of the sleeve by no more than 2" total
    - c) Increasing the size of the fitted garment's arm scye.
11. Check fit by folding along upper arm, basting along lower arm and down other side, and basting onto fitted body.

## Construction:

For the purposes of this workshop, we will be using modern means of construction for ease and speed. The resources listed provide more information on how to construct this garment in a manner more correct for the time period.

1. Wash your fabrics and iron them flat prior to the day of construction.

2. Lay out your outer fabric and fold it in half. Pin the pattern pieces utilizing the edge of the fold along the center line of the back piece. Folding the fabric like this ensures that you have a right and left orientation for each piece as well as speeding up cutting time. Try to keep your pieces oriented the same direction so that the pattern and stretch of the fabric are consistent.

3. Cut out your pieces and iron them again as needed. You should now have 2 front pieces, 2 side pieces (optional), 1 back, and 2 sleeves from the outer fabric.

4. Repeat steps 2 & 3 with your lining fabric.

5. Pin and then sew together the pieces for the outer shell and lining separately. When pinning, place the exterior sides together. The stitch should be a machine-sewn straight stitch about  $\frac{5}{8}$ " from edge of the fabric. This is the standard distance from the edge of the foot and the needle.

6. Finish your interior seams with a zig-zag stitch, bias tape, or serging.

7. Apply any desired decorations to the main body.

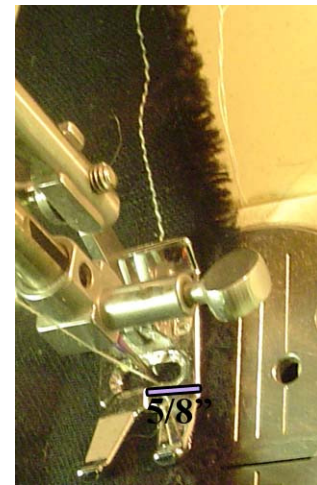
8. Cut out the outer layer and lining for the collar, epaulets (shoulder tabs), and skirting as desired. Pin the inner and outer pieces so that the exterior sides face each other. Sew along your normal seam allowance, leaving the side that attaches to garment unsewn. Turn these pieces so they are right-side out, press, topstitch and decorate as desired.

9. Sew any collar, epaulets, or skirting to the outer shell.

10. Assemble the sleeves, being extra careful to have 1 right side and 1 left side out of both outer fabric and lining. Decorate sleeves as desired.

11. Sew sleeves to outer shell and lining so that you have 2 complete jackets; one lining with sleeves and one outer with sleeves, collar, epaulets and/or skirting.

12. Pin your lining piece to outer along the front seam with the right sides together. Sew the lining to the outer fabric along the front seam, leaving the bottom and top open. Fold the lining in and iron the front seam flat.



13. Fold the lining down and pin in place over the seams where the collar and skirting join the main body. Use a hand-sewn whip-stitch to close these seams.

14. Turn the doublet inside-out. Fold over the fabric twice and hem up the seam with a whip-stitch.



#### Closures:

Direction of closure overlap:

Modern shirts normally have the left side of the garment overlap the right. This makes the garment easier for a right handed person to don by themselves. However, this same facing on a right-handed fencer can create an opening where an attacker's blade might slip between buttons and inside the doublet. The angle required does not make this a safety hazard, but it can be annoying, distracting and rough on your buttons. Consider facing

the opening of the doublet away from the fighter's dominant hand.

#### Buttons:

Put on garment and pin closed. You need some overlap so that the doublet doesn't gape open when you move. You may choose to keep the asymmetrical look. Alternatively, you can fold the top under to create a straight line.

Use chalk to lightly mark the front seam. Remove garment and lay flat. Measure your front length and divide by the number of buttons -1 to find the needed spacing. (One button is for distance 0, the origin). Mark where you would like to place the first button on the top layer (button holes on top, buttons on the bottom). Mark your measured distance down the front top along the edge. Measure the diameter of your button and add 1/4". Measure 1/2" from edge and mark your measured distance perpendicular to the edge (horizontally).

Use small scissors or an X-acto knife to cut slits for buttons. Use buttonhole function on sewing machine or go around the edge with the smallest distance of zig-zag stitch. I like to go 1/2 width for the edges at stitch length 0.5 on scale of 0-4 and full width at the ends with stitch length 0. Alternately, you can hand sew with a buttonhole stitch.

Pin closed along chalk line. Mark a circle in each hole at the corner closest to the edge. Sew buttons down on marks. Put on and button to ensure that each hole will pass the button without slipping out and that everything fits as it should. Move buttons and open or close holes as needed.

#### Frogs:

Pin the front as described above. Measure the front length and divide by the number of frogs minus one. (One frog sits at distance 0.) Mark your spacing, sew the frogs in place at each mark and then test for fit.

Congratulations! You are finished! You should remember to remove any loose threads and chalk before wearing.

## Online Resources:

SCA Society Rapier Marshal's Handbook.

[http://sca.org/officers/marshal/docs/rapier/rapier\\_handbook.pdf](http://sca.org/officers/marshal/docs/rapier/rapier_handbook.pdf)

The core rapier rules for the SCA. This includes terminology, material requirements, and construction of a drop tester. Please note that your Kingdom may have additional requirements or procedures.

Web Gallery of Art. <http://www.wga.hu/index1.html>

A gallery searchable by timeframe, city, artist, type of art, etc.; it is a very powerful tool.

Reconstructing History. [www.reconstructinghistory.com](http://www.reconstructinghistory.com)

They have patterns and articles about a number of clothing styles. If you are nervous about drafting a pattern, consider picking up one of the Renaissance patterns that suits you instead.

The Renaissance Tailor. <http://www.renaissancetailor.com/>

The demonstrations section is a wealth of information. This workshop uses pattern development and fitting directions very close to what is documented (with pictures!) here. If you have never used this process, this is an excellent resource. They also have directions for embellishments and accessories.

Denver Fabrics. <http://www.denverfabrics.com>

They have a good selection of linen, sometimes stock wool, are often cheaper than you will find retail and have a good reputation for service.

Cheep Trim. <http://www.cheeptrim.com/>

This site is a good source for trim, braid, buttons and frogs. There is a very extensive selection, so be prepared to spend some time browsing.

Extreme Costuming. <http://extremecostuming.com/articles/adozendoubletdesigns.html>

Here is an excellent article on the style, layout, and attachment of trim to an English doublet. The comments on Elizabethan color combinations alone make this worth reading.

## Literary Resources (these will all be available at the workshop):

Arnold, Janet. [Patterns of Fashion, the cut and construction of clothes for men and women 1560-1620.](#)

Arnold, Janet. [Queen Elizabeth's Wardrobe Unlocked.](#)

Mikhaila, Ninya and Malcom-Davies, Jane. [The Tudor Tailor, techniques and patterns for making historically accurate period clothing.](#)

Orsi Landini, Roberta & Niccoli, Bruna. [Moda a Firenze 1540-1580: Lo stile de Eleonora de Toledo e la sua influenza](#)