Module Development

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LRNT504 – Instructional Design for TML

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Introduction

This technology mediated learning (TML) module is designed as one section of a course within a program that has primarily been delivered using traditional face-to-face and blended methods. In the interest of exploring flexible learning options within the program, this course will be offered as a pilot and will be evaluated to assess the merits of developing subsequent TML courses for the Apparel Technology program at the Fashion Institute by Olds College (OC).

Instructional Goals

Fashion Apparel students will learn how to calculate (grade) rules required to grade a basic bodice pattern, according to specifications, and how to apply the rules to grade the bodice pattern in the required sizes. Grading in this context refers to increasing and decreasing the dimensions of a base size pattern to include all sizes in the specified range. The term grade is also used to describe the difference in measurement from one size to the next:

Grade (Noun) –The total increase or decrease in measurement between each size within a given size range.

Grade (Verb) – To systematically increase or decrease the dimensions of a master pattern to create a range of sizes for production.

This module is part of a course within the Fashion Apparel major of the Apparel Technology Program. The program curriculum is developed and kept current based on the needs of the industry, communicated primarily through the Industry Advisory Committee (IAC). The IAC meets annually to discuss and provide information regarding trends within the industry, opportunities, and skills required. Pattern grading has been identified as a critical skill within the industry of apparel production. Grading basic patterns, such as the basic bodice, will prepare learners to progress to more complicated patterns and to grading in a computerized environment, using industry specific software.

Objectives

Upon completion of the module, the learner will be able to complete the following:

1. Given the base size front and back pattern pieces for a basic bodice, label all 10 relevant grade points, with no extra points.
2. Based on the chosen size chart, calculate the length and circumference grades, as well as the subsequent width, shoulder, and neck grades for a basic bodice pattern.
    a. Length grades – in centimeters, to the nearest 2 decimal points, with 100% accuracy.
    b. Circumference grade – in centimeters, to the nearest 2 decimal points, with 100% accuracy.
    c. Width grade – based on the circumference grade, in centimeters, to the nearest 2 decimal points, with 100% accuracy.
    d. Shoulder grade – based on the width grade, in centimeters, to the nearest 2 decimal points, with 100% accuracy.
    e. Neck grade - based on the shoulder grade, in centimeters, to the nearest 2 decimal points, with 100% accuracy.
3. Based on the size range, grade calculations, and the grade points identified, interpret the x and y movements required to write grade rules for the basic bodice, in centimeters, to the nearest 2 decimal points, with 100% accuracy.
4. Using a ruler, pencil, and drafting paper, and based on the grade rules written, draw an x and y axis and guidelines needed to grade a selected size within the size range, with 100% accuracy.
5. Using the base size pattern, the grade rules, and the guidelines drawn, manipulate the pattern in the x and y as per each grade rule, marking each point, without exceeding a tolerance of 1 mm in more than 2 areas.
6. Using the original base size bodice pattern and a ruler, verify the difference between the base size and each graded size, with a tolerance of 1 mm.

Learner Analysis

Fashion Apparel students in the Grading and Marker Making course are in the second year of a two year diploma program in Apparel Technology (Fashion Apparel major). With few exceptions, students are full time and are scheduled in other courses on campus. The majority of the students are female, between the age of 19 and 25 years old, from various ethnic backgrounds. The program is delivered in English and all students are fluent in the language. As a program admission requirement, students must have the equivalent of an Alberta high school diploma, including grade 12 English and grade 11 Math.

Students in this course have previously completed at least two levels of pattern design, therefore they understand pattern shapes and how the shapes relate to the body. Within this course students have previously learned the terminology related to pattern grading. They have also calculated and graded a basic skirt, which requires similar, but fewer calculations than the bodice. Students in the Apparel Technology program tend to be primarily visual and kinesthetic learners. They appreciate visuals and are most interested in what they will be creating. Based on an informal survey given to students of the current Grading and Marker Making course, about one quarter of the students have a low level of confidence in their mathematical abilities. Learning strategies will include numerous examples and practice opportunities that connect the new concepts to knowledge that the students have previously mastered. Successful completion of the Grading and Marker Making course is a graduation requirement.

Technology is used by students on a regular basis in the learning environment and they are generally comfortable exploring and using technology. In 2012 Olds College integrated iPads into the teaching and learning environment. Students use iPads and other mobile devices inside and outside of the classroom for a variety of purposes, such as accessing resources on the LMS system, documenting information (including visual documentation of various examples and procedures), manage information, and use apps to support various tasks. A variety of google apps are also used to communicate and share

information. Wireless internet access is available throughout the campus. Computers are accessible to students at the college and the majority of students have access to a computer at home. To support students in the use of technology, the Olds College Information Technology team provides resources online and is available by phone or e-mail.

Context Analysis

Performance Context: In industry, pattern grading is executed in apparel companies that can range from a small design studio to a large manufacturer. Regardless of the size of the facility, the space will include drafting table(s), dressform(s), and pattern drafting rulers.

As a partner of the Apparel Innovation Centre (AIC), Olds College faculty and students have access to the AIC production facilities at an alternate location within the city. This allows the students the opportunity to visit and even practice their skills in an actual manufacturing environment.

Learning Context: Although the delivery of this module will be within a TML environment, students will have access to all student facilities and services at the college campus. Besides the computers, students are encouraged to use the studios with industry standard drafting tables and a light table to practice the skill of pattern grading. The studios at the Fashion Institute by OC are comparable to mid sized design studios. The studios are open from 7:00 am until 9:00 pm most weekdays and are open approximately 6 hours on the weekend. In that students attend other courses on campus, it is convenient for them to access the studios.

Instructional Strategies

Apparel Technology students have a demanding academic workload. Time management is critical for student success in both the program and in the industry, where deadlines and heavy work periods are prominent. The Grading and Marker Making course will be offered as a self-paced course, within a 15 week semester. It is self-paced in the sense that students will have flexibility to manage their

time within the structure of the course. Students will have access to the studios on campus and will be required to complete activities within specified time frames, emulating the demands of project management within the industry.

The skill of pattern grading requires learners to relate pattern knowledge with body dimensions to make calculations that are then applied to manipulate the pattern, completing the graded sizes. The performance of the skill requires understanding, problem-solving, analyzing, applying, and evaluating, and is thus suited to cognitive learning theories (Ertmer & Newby, 2013). Information will be structured and sequenced, allowing learners to build understanding and make connections between previous knowledge and new knowledge. Instruction will include demonstrations and illustrative examples to appeal to learners' preference for visual learning. There will be regular opportunities for learners to interact with the materials and to practice and receive correctional feedback. This contributes to the mastery of each step in the sequence, prior to progressing to the next step, which is critical to learners' success. Learners will be able to go back within the instruction to repeat sections or to further practice a particular task.

In relation to Bloom's domains of learning outcomes, most of the objectives fall within the middle levels of application and analysis, leading up to the final objective of evaluating (Jorgenson, 2012). Objectives 1, 2, and 3 call for intellectual skills and require comprehension and analysis prior to performing the task. Objectives 4 and 5 call for psychomotor skills and require the application of the intellectual objectives in order to perform the required tasks. In the final step (objective 6) learners use intellectual skills to evaluate their work, verifying the accuracy. The detection of errors brings the learner back to a previous step in the sequence.

The instruction for this module is organized into three clusters, grouping the initial intellectual skills, followed by the psychomotor skills, and finishing with the final intellectual skill of evaluating. The first topic is somewhat longer than the other two, as the foundation of knowledge is established. The

difference between the sizes of topic one and topic two sections is not as significant as it may appear, as the effort required to complete the tasks in topic two is greater. Topic three completes the module and is the shortest section, followed by a summative assessment.

Instructional Materials

Instruction for the Grading and Marker Making module will be delivered through the learning management system, Moodle. Moodle is used consistently throughout Olds College for teaching and learning in the online and face-to-face environments. Supports are in place for both faculty and students through the Education Technology & Curriculum department and Technology Services. Students are familiar with the platform as they have experienced Moodle in previous courses.

Demonstrations will be presented using videos or illustrated examples to provide clear visuals of the concepts and to allow learners to revisit the content. In video presentations of key concepts, accompanying text or downloadable files will provide learners with alternate means to receive the information and to review as needed. A help button will be available periodically and will take learners to an “Ask a Question” forum where they can post and respond to questions which the instructor will monitor and respond to. Commonly, examples will be presented as interactive graphics in video form and will include transitioning text, highlights, and arrows to bring attention to specific information. Videos will be presented via YouTube and embedded in Moodle.

Through the instructor videos, learners will sense the instructor’s enthusiasm, contributing to learner motivation. Murphy and Rodriguez-Manzananares (2012) claim that the presence of instructor voice and visual ques promotes positive rapport between students and instructor in an online environment. Benefits of a positive rapport include higher motivation, increased comfort, and learner satisfaction (Weimer, 2010). When information is presented by the instructor via video, the setting will commonly be an apparel production facility or studio, providing learners with a visual of an authentic performance context.

Based on cognitive learning theories, learner interaction with the content as well as opportunities for practice and corrective feedback contribute to learner success (Ertmer & Newby, 2013). The interactive slides will allow learners to practice a task and receive feedback. Additionally, Moodle quizzes will be used for some activities and will be set to provide immediate feedback to the learner. Forums will allow students the opportunity to make discoveries through instructor guided discussion. When a specific form or format is required for tasks, such as entering correct numbers on a grade chart, it will be set up using software that will allow learners to make the entries and prompt them with hints or questions, guiding them, should they make an incorrect entry. Google docs, distributed using the Doctopus add-on, will be used for the final summative assessment, allowing for flexibility in the formatting of the various question types.

The course materials consist of previously developed and developing materials. Many of the illustrated examples, grade charts, and patterns have been developed for a face-to-face version of this course and have been altered or re-created for the online environment. It remains to convert materials to become interactive. The video demonstrations will need to be produced.

The Moodle site will serve as the consistent framework for the course. All course materials will be embedded or linked to the Moodle course site. As learners encounter an activity, they will need to successfully complete the activity, prior to advancing with the content. This structure supports the sequencing of the content and ensures that learners attain the knowledge or skill required to progress to the subsequent steps. Learners will be able to re-visit previously completed sections from the Moodle home page. Important dates, such as deadlines, will be posted on the Moodle calendar.

Content Outline

Topic One – Establishing Grade Rules

In this section, the focus will be on achieving objectives #1, #2, and #3 which are the intellectual skills that set the foundation for the remaining objectives.

1) Pre-Instructional Activities

- Motivation
    - Through video, the instructor will introduce the topic and provide rationale that the learner can relate to. Seeing and hearing the instructor through video gives the learners a sense of who the instructor is and supports closing the personal gap that sometimes exists in online learning.
    - An image of a blouse from a retailer that is popular within the demographic will be shown on three different models in three different sizes to show the results of what grading leads to in the apparel industry.
- Identify objectives
    - Illustrated examples of a size chart from a popular apparel company and an image of a bodice with words related to the objectives will be used as a visual aid in describing the objectives.
    - At this point images that show actual calculations and grade coordinates will NOT be included, as it may overwhelm students that are resistant to applying math concepts.
    - Learners can access a downloadable text file, outlining the objectives.
- Pre-requisite skill
    - Review the relationship between the circumference grade and width grade of a skirt.
        - An illustrated example demonstrating the circumference and width grades of a skirt will be used to activate the previous knowledge.

- Relate the previously graded skirt pattern with a graded bodice pattern. Referring to illustrated examples of skirt and bodice patterns, learners will participate in a discussion forum. They will be asked to share observations on one similarity and one difference and must comment on one other post. The instructor will monitor and guide the discussion, leading the students to the conclusions:
    - Similar: circumference/ width, length, darts at approximately the mid point
    - Different: armscye, neckline
    - Within the discussion, the instructor will encourage students to hypothesize, based on experience with pattern drafting for different body sizes, how the armscye and neckline would change per size.

2) Content Presentation

- Using an interactive slide to promote learner-content interaction, a visual of a bodice displaying the internal growth is presented. The learner will be guided through a series of questions that will lead the students to:
    - Recognize the proportions of the grading.
    - Identify the points that need to be labeled as grade points (objective #1).
        - As students identify points, feedback is provided to point out the growth area related to the point, or if it is not a relevant grade point, feedback will prompt the guide the student to the next correct point.
- Using a slide with voice, text, and transitions, the instructor will explain the formulas for calculating the bodice, referring to the bodice visual and identifying the grade points that the formulas apply to. Using an interactive slide, the learner will repeat the process, using a different circumference grade as an example. The interactive slide will include correctional feedback.
    - A downloadable PDF that summarizes the formulas is accessible.

    - Learners can seek clarification in an “Ask a Question” forum by pressing the question mark button. This feature will appear on slides when key concepts are presented.
- Using a size chart within an interactive slide, the instructor will appear in a video and will explain the application of the formulas to write the grade rules for the size 12, from the base size 10.
    - The learner will simultaneously fill in the grade rules on the interactive chart.
    - Downloadable files are available for the grade chart and for the script, providing the learner with resources for future reference.

3) Learner Participation

- Discussion forum – students will conduct an online search for a size chart or fitting guide from an apparel company and answer questions regarding the information found in the chart and relating the information to the formulas. Students will comment on similarities and difference in their findings. The instructor will monitor discussion and offer questions and comments to guide the discussion (objective #2).
    - In this activity, learners retrieve and apply the initial information to a new condition.
    - This also provides motivation as they relate the information to companies that they may be interested in, both as consumers and as potential employers.
- Continuing with the size chart that was used to demonstrate the calculation of grade rules for a size 12, learners will apply the formulas to complete the size chart for the remaining sizes (objective #3).
    - Using an interactive grade chart, students will be guided to write the grade rules in an order/grouping that allows the learner to see the relationship between the calculations. For example:
        - Enter all the rules related to the hem length grade
        - Enter all the rules related to the width grade
        - Enter all the rules related to the dart width grade

- After each section is completed, feedback will be provided to show the learner which rules are correct and will prompt them to correct any incorrect rules. For example:
    - Consider the direction of the movement for this point. Should it be positive or negative?
    - If all hem points move the same in the x, which point should match to this point in the x movement?

Topic Two – Grading the Bodice Pattern

In this section, the focus will be on achieving objectives #4 and #5, which are the psychomotor skills required to perform the grading.

1) Pre-Instructional Activities

- Identify objectives/ Motivation
    - An illustrated example of the graded bodice will show what the learners will accomplish. This meets the learners' needs of visualizing what they will be creating and provides motivation to complete the task.
        - Learners can access a downloadable text file, outlining the objectives.
    - An illustrated example of the bodice with guidelines will be used to briefly show the initial step to grading the bodice.
- Pre-requisite skill
    - Activate the knowledge of how these objectives were applied to the previously graded skirt.
        - To connect the previous knowledge with the new knowledge, a previously graded size 12 skirt will be compared to the size 12 bodice, bringing attention to the guidelines.

        - Illustrated examples, along with audio will be used and presented in video format
    - Similarities and differences are brought to the learner's attention.

2) Content Presentation
    - Through videos, the instructor demonstrates the grading of selected sizes individually, relating the guidelines and the process to the grade chart.
    - The learner is able to review the videos as required.

3) Learner Participation
    - Learners practice drawing the guidelines and grading the front bodice pattern piece in all sizes within the size range, using a ruler, paper and pencils (objectives #4, #5).
    - Learners compare the graded sizes with a key provided in order to discern whether or not they have been able to grade the bodice pattern successfully.
        - Learners compare their graded front pieces against a key provided and are encouraged to seek support if they are challenged to identify the source of errors.
        - Students can seek feedback from the instructor face-to-face or asynchronously. The instructor is available during scheduled open lab times to provide support to students. This is the ideal time for students to discuss their progress and seek advice, should they have any problems performing the task to date.
    - Learners grade the back bodice pattern piece in all sizes in the size range using a ruler, paper and pencils
        - Having experienced the grading of the front bodice, and having identified areas of improvement, learners will use the graded back pattern piece and will verify their work in the final section of the module.

Topic Three – Verifying the Graded Pattern

In this section, the focus will be on achieving the final objective #6 which is to verify the graded pattern and make any necessary corrections.

1) Pre-Instructional Activities
    - Identify objectives & Motivation
        - Through a video, the instructor will briefly introduce the objective, followed by a scenario with fashionable avatar characters showing a situation of a missed grading error carried through the production process. The cost of the error will be explained. In my experience, students tend to remember stories that relate to a concept.
    - Activate the knowledge
        - In a short follow up video, the instructor will elaborate on the importance of the objective. They will also assure the learner that they have all the information (grade chart) and ability (measuring) necessary to complete this task.
2) Content Presentation
    - Through video, the instructor will demonstrate to learners how to stack the sizes to create a graded nest. Within the video, the instructor will show a set of sizes that are graded properly, bringing attention to the visual repetition in the differences.
    - Graded nests with errors will be used to illustrate how the error is recognized, along with strategies of how to rectify the problem.
    - A second video will demonstrate how to compare the measurements of each size with the base size.
3) Learner Participation
    - In the form of a Moodle quiz, with instant feedback, learners will be given images of graded nests and will be asked to identify any discrepancies that may exist between sizes, and to identify the solution required to rectify the error.

- Learners will stack their completed graded back pattern pieces to check visually for errors.
- Learners will compare the measurements of each size of the graded back bodice with the base size (objective #6).
- Learners will correct any errors identified.
    - Students can seek feedback from the instructor face-to-face or asynchronously.
- The graded back pattern pieces are submitted for assessment of accuracy by the specified due date.

4) Post-Module Follow –Through Activities

- Following all the pattern grading modules, learners will visit the AIC in small groups and will observe pattern graders preparing styles for production. They will compare their observations in this performance environment with their experience within the learning environment.

Content Sources

- Developed Resources by Lori Kemp
- RW & Co Size Chart: https://www.rw-co.com/en/size-chart-women-dresses.html
- Banana Republic Size Chart: http://bananarepublic.gapcanada.ca/customerService/info.do?cid=1310&mlink=,5801895&clink=5801895
- Hanford, J. (2003). *Professional Pattern Grading for Women's, Men's, and Children's Apparel*. New York, NY: Fairchild Publications

Assessment Strategies

Formative assessments are used frequently throughout the module to provide learners with the opportunity to practice and receive correctional feedback, aligning with cognitive learning strategies. Strategies also include self-assessment used to promote reflection and encourage learners to recognize quality in their work, as well as areas that require improvement (Dick, Carey & Carey, 2015).

The summative assessment is designed to examine each learner's ability to perform all objectives outlined in the module. The questions are sequenced in the order that the tasks are performed, which not only emulates the process, but also supports the retrieval of the information. The sequence of the questions enables the learner to connect the information required for each question to the previous question.

The assessment is separated in two parts, as the final tasks of grading and verifying the patterns are best performed using industry standard drafting tables. A benefit of this is that the learner is assessed within a context that is comparable to the performance context, improving the likeliness that skill transfer will be successful. The first part will be completed using a google form and the second part will be completed on site at the Fashion Institute at one of four optional times scheduled.

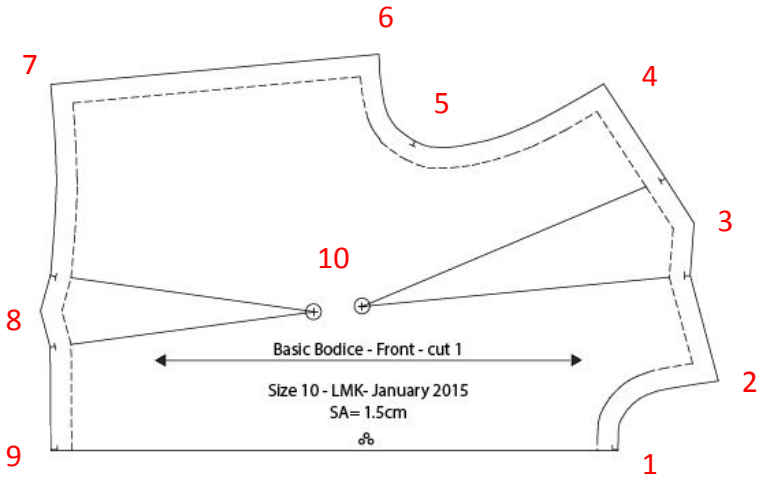
Total = _____/50 (including parts one and two)

Assessment Part One

Part one is to be completed by DATE, using the google doc provided.

1. Label the grade points around the perimeter of the pattern piece provided by moving the number to the correct point. (Grading: 1 point per grade point labeled correctly; 1 point will be deducted for each extra grade point identified) *Objective #1*

/10



2. What is the circumference grade for sizes 6-16, based on this Banana Republic size chart? Convert the measurement to the metric equivalent. (Grading: 1 point for each grade being correct in imperial and metric) *Objective #2b*

/5

sizes	imperial grade	metric grade
6-8	1”	2.5cm
8-10	1”	2.5cm
10-12	1 ½”	3.8cm
12-14	1 ½”	3.8cm
14-16	1 ½”	3.8cm

TOPS & SWEATERS

How to measure

your bust: With arms relaxed at your sides, measure the fullest part of your bust, keeping the tape parallel to the ground.

your sleeve: With your arm bent at 90 degrees, place your hand on your hip. Begin at the center of the back of your neck and measure across the shoulder to your elbow down to the wrist.

WOMEN'S SIZE	ALPHA SIZE	BUST	NATURAL WAIST	HIP	SLEEVE LENGTH
00	XS	31"	24"	34"	31½"
0	XS	32"	25"	35"	31½"
2	XS	33"	26"	36"	31½"
4	S	34"	27"	37"	32"
6	S	35"	28"	38"	32"
8	M	36"	29"	39"	33"
10	M	37"	30"	40"	33"
12	L	38½"	31½"	41½"	34"
14	L	40"	33"	43"	34"
16	XL	41½"	34½"	44½"	34½"

http://bananarepublic.gapcanada.ca/customerService/info.do?cid=1310&mlink=,5801895&clink=5801895

3. What information is required to determine the length grades? (Grading: 1 point for the correct answer) *Objective #2a*

   /1 Shoulder to waist measurements and armcye to waist measurements

4. How is the width grade calculated, based on the circumference grade? (Grading: 1 point for the correct answer) *Objective #2c*

   /1 The width grade = ¼ of the circumference grade

5. How is the dart width grade calculated, based on the width grade? (Grading: 1 point for the correct answer) *Objective #2c*

   /1 The dart width grade = ½ of the overall width grade

6. How is the shoulder grade calculated, based on the width grade? (Grading: 1 point for the correct answer) *Objective #2d*

   /1 The shoulder width grade = 2/3 of the overall width grade

7. How is the neck width grade calculated, based on the shoulder and dart width grade? (Grading: 1 point for the correct answer) *Objective #2e*

   /1 The neck width grade = dart width grade – (shoulder grade – dart grade)

8. Based on calculations from the Banana Republic size chart, write the grade rules for a size range of 6-16, with a base size of 10, for the basic bodice. Because the size chart does not include length measurements, we will assume that there is a difference of **0.3cm** between each size from the armscye to waist and a difference of **0.9cm** between each size from shoulder to waist. *Objective #3*

   /10

Bodice Grade Rule Chart – Banana Republic

	1 Centre Neck	
	X	Y
6-8	0.3cm	0
8-10	0.3cm	0
10-12	0.3cm	0
12-14	0.3cm	0
14-16	0.3cm	0

	2 Neck/ Shoulder	
	X	Y
6-8	0.6cm	0
8-10	0.6cm	0
10-12	0.6cm	0
12-14	0.6cm	0
14-16	0.6cm	0

	3 Shoulder Dart	
	X	Y
6-8	0.6cm	0.32cm
8-10	0.6cm	0.32cm
10-12	0.6cm	0.48cm
12-14	0.6cm	0.48cm
14-16	0.6cm	0.48cm

	4 Shoulder/ Armscye	
	X	Y
6-8	0.6cm	0.42cm
8-10	0.6cm	0.42cm
10-12	0.6cm	0.63cm
12-14	0.6cm	0.63cm
14-16	0.6cm	0.63cm

	5 Mid Armscye	
	X	Y
6-8	0	0.42cm
8-10	0	0.42cm
10-12	0	0.63cm
12-14	0	0.63cm
14-16	0	0.63cm

	6 Armscye /Side Seam	
	X	Y
6-8	0	0.63cm
8-10	0	0.63cm
10-12	0	0.95cm
12-14	0	0.95cm
14-16	0	0.95cm

	7 Side Seam/ Waist	
	X	Y
6-8	-0.3cm	0.63cm
8-10	-0.3cm	0.63cm
10-12	-0.3cm	0.95cm
12-14	-0.3cm	0.95cm
14-16	-0.3cm	0.95cm

	8 Mid Waist	
	X	Y
6-8	-0.3cm	0.32cm
8-10	-0.3cm	0.32cm
10-12	-0.3cm	0.48cm
12-14	-0.3cm	0.48cm
14-16	-0.3cm	0.48cm

	9 Centre Hem	
	X	Y
6-8	-0.3cm	0
8-10	-0.3cm	0
10-12	-0.3cm	0
12-14	-0.3cm	0
14-16	-0.3cm	0

	10 Bust Point	
	X	Y
6-8	0	0.32cm
8-10	0	0.32cm
10-12	0	0.48cm
12-14	0	0.48cm
	0	0.48cm

	X	Y
6-8		
8-10		
10-12		
12-14		
14-16		

	X	Y
6-8		
8-10		
10-12		
12-14		
14-16		

Assessment Part Two

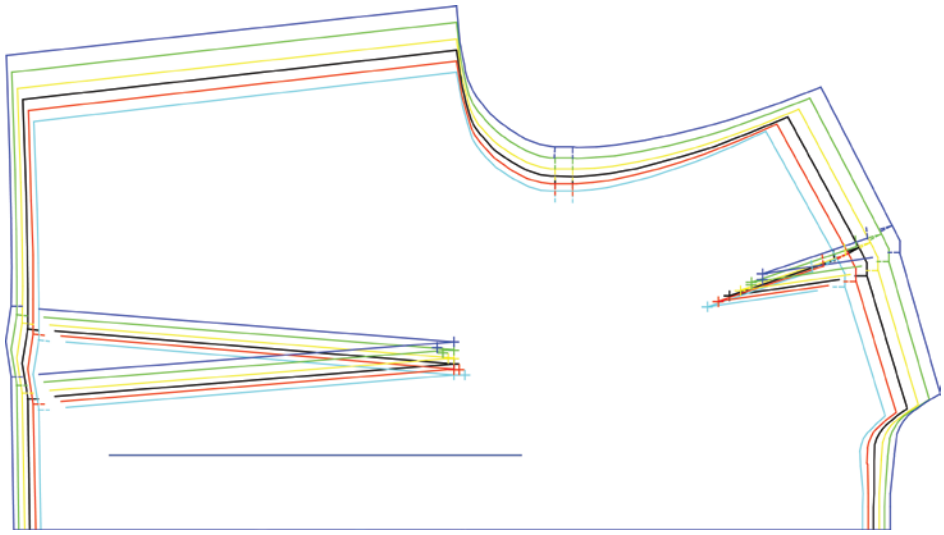
Part two must be completed in a studio at the Fashion Institute on one of the four dates provided.

Using a ruler, pencil, and paper, and based on the grade rules written in question #8, draw the guidelines and complete the grading for all sizes within the size range of 6-16. *Objectives #4, #5*

Verify your work prior to submission. (Grading: 2 points for each size that is does not exceed a tolerance of 1mm in more than 2 areas). *Objective #6*

/20

Key (example is not to scale):



Evaluation Plan

An important goal of evaluating the Grading and Marker Making module is to assess the merits of developing subsequent TML courses as a means to provide flexible learning opportunities to students. As this is the pilot module in the project, it is particularly important to thoroughly evaluate the learning experience and effectiveness, in that there is potential for it to set the standard for subsequent online courses within the Apparel Technology program.

Upon completion of the initial draft of the module, formative evaluations will begin with one-to-one interviews with learners that have completed the pre-requisite courses. The purpose of the interviews will be to gain an initial understanding of the learners' perception of the module. Specific information that will be gathered includes:

- Are the explanations clear?
- Is it easy to navigate?
- Is there sufficient information to complete the tasks?
- Are there additional or different aids that would support the comprehension?

The program tutor will also be a valuable resource and will be consulted at various stages of development. The tutor is a past student who works in the industry and, through the role of supporting students, has a strong understanding of how the learner processes information and where potential challenges may exist. The tutor is also able to relate the materials to the real world of apparel production as a SME.

Prior to the development of the entire Grading and Marker Making course, the bodice module will be presented in its online version to a class of students enrolled in the face-to-face version of the course, consisting of 12 to 18 students. Student achievement and survey information will be taken into account when developing the other modules in the course.

At each stage of the formative assessment, adjustments will be made to the module, based on the feedback. The feedback will also be taken into account when developing the remainder of the modules for the course. Upon completion of the entire TML course, the cycle of one-to-one interviews and small class evaluations will be repeated.

Once a graduate has been employed for a period of three months in a grading position, a summative evaluation will be conducted with the employers to compare the performance of the skills acquired with the needs, as identified with industry. Particular areas of interest will include transfer of skill, quality of skills, and congruence of methods. The graduate will also be surveyed in order to understand the perception of their ability to perform. The results of the evaluation will be further discussed at the annual Industry Advisory meeting, at which point clarifying questions may be posed and members will be invited to elaborate on the needs. Results of this summative evaluation will influence decisions regarding the adoption of the course in the TML format, as well as the merits of developing other TML courses for the program.

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