Standardizing Body Models in the 3D Workflow

*This is an individual and group assignment.

Specifics:

Part One: Reading & Video Responses

1. After reviewing the assigned readings and video on the topic of Standardizing Fit in the 3D Workflow, please answer the following questions:
    a. What are some extra considerations that need to be kept in mind when fitting garments outside traditional straight size ranges and how do these factors affect the fitting process? (Fitting Inclusive)
    b. Which methods can product developers use to ensure proper fit in every size across an extended size range? What are the downsides of the methods, and what are some limitations? (Fitting Inclusive)
    c. What are some current issues with using avatars in 3D design environments? Do these same issues transfer to 3D body scans? (Initial Investigation)
    d. Describe three ways that 3D body scanning technologies can potentially improve existing fit issues in the apparel industry? (Three-Dimensional)
    e. In your opinion, how can the examples of increased consumer satisfaction gained through 3D body scanning lead to a reduction in clothing waste? (Three-Dimensional)

Part Two: Body Scanning Workshop & Virtual Body Model Comparison

In this activity, students address the problem of accurate fit in the virtual environment, regarding discrepancies between avatars and real-life human measurements. They will critically analyze three different virtual bodies and choose which one is the "best" tool for developing garment patterns and conducting fittings in the virtual environment.

1. Experience the 3D body scanning process in person, learn how the technology works and create your own body scanned form (individual scans are conducted on a volunteer basis).
2. Observe the industry partner's 3D body scans for their male and female fit models in stationary and active positions, then compare the male fit model's body measurements to Alvanon's library of virtual AlvaForms and select the form that has the closest specifications to the provided fit model.
    a. As a class, discuss which form was selected by the students and why

        i. e.g. Were there fit discrepancies between the AlvaForm and provided fit model, what concessions were made when selecting the closest form, and which body measurements were most important in making the final decision.
3. Conduct a side-by-side comparison of the fit model's 3D body scanned form, the closest AlvaForm match, and a CLO avatar with the fit model's measurements.
    a. As a class, discuss the visual differences in the three forms and how these differences could potentially impact garment fit.
4. Write out an assessment as a group to give to the industry partner – what type of virtual body model (CLO avatar based on company's fit model measurement, a 3D body scan of the company's fit model, or virtual AlvaForm) would you suggest the industry partner company pursue for their 3D workflow? why? Submit a Word document with your responses.

Reading, Video & Activity Resources:

- See Act#2 PDFs in the Activity Readings folder.
    - PDF - Initial Investigation into Real 3D Body Scanning Versus Avatars for the Virtual Fitting of Garments
    - PDF - Three-dimensional Body Scanning to Improve Fit
- Fitting Inclusive Sizes Digitally - https://www.youtube.com/watch?v=uENWygvWiCw&t=1285s
- AlvaForm Library - https://alvanon.com/resources/alvaform-measurements-specs/

Competencies: 1) critical decision-making, 2) creative problem solving, 3) spatial visualization, 4) task management and completion, 5) collaboration & teamwork