



## **Tech Pack Exchange Project: Advancing Students' Competencies and Professional Skills Based on ITAA Meta-Goals**

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Technical design and specification development are essential competencies for students preparing for careers in the apparel industry. ITAA 2021 meta-goals for four-year baccalaureate programs (2022) emphasize the importance of specific skills and competencies including knowledge of apparel production processes and technical specification (ITAA, 2022). To apply and enhance these competences in apparel design students at a large state university, a new, tech pack exchange project was developed in a senior-level technical apparel design course. Twenty students were enrolled in the course. By random selection, students were assigned to teams of two. The project was designed so that the teams acted as both 'retailers' that want to produce a garment by contracting a manufacturer and as 'manufacturer' producing a garment for a retailer based on specifications received. A class discussion was held to determine the garment type to be used for the project and ensure similar level of complexity for all teams. A woven top with sleeves, closure, appropriate edge treatments, and linings/facings was selected as the focus product for the project.

The projects involved two parts. In the first part, each team developed a concept board and sketches for a woven top they would like to produce. Then, they developed a tech pack for the top, including tech flats, necessary detail sketches, Bill of Materials, Points of Measures page, and a Construction page outlining seams and stitched to be used for assembling the top. In the second part, the teams exchanged their tech packs with another randomly selected team. Thus, each team had to work with the partner team to get their woven top produced as well as had to produce the partner team's top using the tech pack received, acting as a manufacturer. It was decided that the 'retailer' team would provide the fabric and findings to the 'manufacturer' team in this project. In the future, it is recommended to have student teams communicate and make decisions on 'sourcing' the materials.

Teams were required to submit the finished garment to the partner team by a specific deadline. Upon receiving the garments, student teams conducted sample evaluation that included measuring the garment and comparing to initial specifications, assessing the fit and completing a fit history chart, and assessing the construction. All teams completed sample evaluation forms where they noted comments related to their evaluation and instructions for future samples. The

teams presented their tech packs and garments received from ‘manufacturer’ to the class as the final step of the project.

Students were also asked to complete a project reflections form, where they expressed their opinions and evaluated their experience related to the project. They were asked to provide feedback to the instructor for improving the project as well. Student experiences and feedback were widely positive as they thought the project was challenging but interesting and something they had never done before. It made them think about the importance of correct specifications and understand consequences of incorrect information in the tech packs. The project also made the students communicate with partner teams to seek clarifications and solve issues such as incorrect measurement identified. In some cases, students experienced frustrations working with partner teams or using tech packs that were not clear. They had to find solutions but could also seek the instructor’s help.

It should be noted that before starting the tech pack exchange projects, students learned and practiced various technical design skills, including developing tech packs for three different garments. Detailed description of assignment, outlining expectations, the garment requirements, and specific due dates were provided to students as they began working on the project. Only one sample was produced in this project due to the time constraints of the semester. It would be beneficial to students to develop more samples, if necessary, to achieve the required garments and to mimic the industry processes more closely. The instructor could have various level of involvement in the decision-making processes during the project completion. For example, if a student notices an incorrect measurement for a sleeve in the tech pack that if used would yield a garment with extremely narrow sleeves, the instructor could provide clear instructions or leave it to the students to make educated decisions on how to proceed (e.g., communicate with partner team or use measurements as is).

In addition to enhancing students’ competencies in apparel production processes and technical design, completing this project helps students to apply and enhance their interpersonal skills including communicating ideas in visual, written, and oral forms through tech pack development as well as communicating with the partner team and class presentation. Students also develop their collaboration, team participation, and leadership skills as they work together to develop tech packs and with partner teams during the ‘production’ process.

Students also enhance multiple other core competencies and skills included in ITAA 2021 meta-goals (ITAA, 2022). The project’s complexity requires application of cognitive skills such as critical analysis and creative thinking to solve issues that students may encounter while

completing the assignment. These may be related to incorrect measurements, missing specifications, finding appropriate methods for garment assembly, etc. Students are also required to use correct terminology, tools, and technology to develop tech specifications (e.g., points of measure, BOM, tech flats) and communicate the necessary information to the partner team through tech packs as well as direct interactions. As students complete the project, they also may encounter errors on partner team's specifications. This would require use of professional skills such as critiquing ideas constructively and effectively problem-solving with the partner team. The project also gives students decision-making power throughout the project and helps them understand the complexities of real-life apparel production processes. The project received positive remarks as an effective learning tool for technical design processes from a technical design professional in a leadership role at a large and well-known athletic company.

#### References

ITAA. (2022). *ITAA four-year baccalaureate program meta-goals 2021*. Retrieved in March 2022 from <https://itaaonline.org/page/Metagoals>