Abstract: Given the rapid transformation of the aerospace sector in the last decade, teaching practices should prepare engineers to face fast-paced industries that are dealing with exceedingly complex problems. Now more than ever we need engineers who are capable of working and communicating effectively within large and multi-disciplinary groups, considering the introduction of new material systems such as advanced composites in primary structural elements, development of automated processing methods such as Automated Fiber Placement (AFP), and the transition to interconnectivity among production systems, workers, products and customers. Exceedingly we need to train well-rounded and practical-minded engineers and scientists. At the University of Washington, we are dedicated to support the aerospace industry by training the next generation of engineers. A new 16,000 sq. ft. facility, Advanced Composites Center (ACC), will be dedicated for manufacturing of aerospace composite parts. Taking advantage of automation and AFP processing, sensor technologies, autoclaves and other manufacturing equipment, we aim to replicate a small factory within the university environment at the ACC. Partnering with industry, this facility will enable students to gain practical experience working on industry relevant problems within a factory setting. In addition, while working on industrial projects, students will gain experience on business, intellectual property (IP) and project management aspects.

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