Packaging Foundations

with Dr. Robert J. Bush

It is not an exaggeration to say that packaging makes modern life possible. Packaging maintains the effectiveness of our medicines. Packaging makes storing and moving our food possible and efficient. Packaging informs us and helps us make better purchase decisions. Packaging helps us use products – from radioactive materials, to medical inhalers, to Redi-Whip.

Packaging comes in a staggeringly large assortment of types yet is so common that we hardly notice it in everyday life. Many materials are utilized for packaging - paper, wood, metal, glass, and an array of polymers. Packaging creates problems and challenges. Much of what we discard is packaging material as is most of what we recover and recycle. In a world changed by the COVID-19 pandemic, packaging has been called upon to protect food and medicines while facilitating increasing and efficient home deliveries.

Many people are surprised to learn that the packaging industry is huge (quite possibly the third largest in the United States), operates in almost every community, and offers very attractive career paths. Graduates find careers in packaging design (both structural and graphic), management, sales, logistics, research, and other areas. Packaging graduates are well paid and in demand. Virginia Tech offers both a major and minor in Packaging Systems & Design.

Packaging Foundations is an introduction to the large and varied world of packaging. The course is suitable for all students and majors and has no prerequisites. Students will learn about the functions of packaging, properties of packaging materials, trends in packaging, packaging careers, and the role of packaging in furthering sustainability. We will learn about advancements in packaging such as smart/active packaging systems and how eye tracking technologies are used to understand consumer/packaging interactions. Students will get hands-on experience with packaging design software and develop their own prototype packaging system in a virtual environment.

Work at your own pace and time with flexible times for zoom-based conversations with professors and classmates!

Packaging Foundations carries two credit-hours. After completing the course, students will have the option of completing a one-credit hour laboratory during a subsequent semester. The lab will allow students to use testing and production equipment to produce a prototype packaging system of their design. Student majoring or minoring in packaging may substitute Packaging Foundations and the lab for the required Principles of Packaging course.