



Students coming from  
Industrial Systems  
Engineering...

# Packaging Systems and Design

[packaging.sbio.vt.edu](http://packaging.sbio.vt.edu)

For students interested in systems optimization...

If you are interested in the study and optimization of complex systems such as the manufacturing and the distribution of goods, the Packaging Systems and Design degree offers an opportunity for you to learn about these topics and put them into practice.

Every day, Packaging Engineers work to optimize packaging systems. They develop solutions that are compatible with specific production equipment, evaluate the machinery that form packages, fill them with products, and maintain the required productivity rates. Professionals in the packaging field are commonly involved in the product development stage and must conduct cost analysis of their solutions, develop quality specifications, as well as understand material properties in order to make selections for each use case. Our students will also learn to evaluate the environmental impact of packaging and learn to decide when to use plastics versus bio-based materials.

Professionals in the packaging area also specialize in developing and optimizing packaging for distribution, ensuring compatibility with the material handling equipment. This is not only to be sure that the product will survive undamaged, but also that it is being executed in the most efficient manner, with the minimum weight and volume possible. As a packaging student, you will learn Computer-Aided Design of structural packaging and how to evaluate its efficiency throughout the supply chain as well as learning strategies that can improve your designs.

Overall, a professional in the packaging field commonly acts as a project manager. In the process of developing packaging solutions, you will need to interact with departments such as marketing, production, finance, R&D and others, all with conflicting goals. The Packaging Engineer is the professional in charge of coordinating everyone and managing their needs and expectations.

Professionals in the packaging field are commonly hired as packaging engineers, packaging scientists, production engineers and others. In these roles, and throughout the packaging degree, you will acquire a set of skills that might overlap with Industrial Engineering but will specialize highly on the skillset's application to packaging development stages.

Students who have an interest in packaging systems work for companies such as **Newell Brands**, **PepsiCo**, **Tesla**, **L'Oréal**, **Unilever**, **Procter & Gamble** or any other company that manufactures and ships products. Their job focuses on optimizing packaging materials in order to reduce the cost of the packages, reduce shipping costs, eliminate damages to the products, and increase the sustainability of packaging solutions.

*Starting salaries range from \$60-\$120K based on a recent alumni survey.*



COLLEGE OF NATURAL RESOURCES AND ENVIRONMENT  
**SUSTAINABLE BIOMATERIALS**  
VIRGINIA TECH.

The role of the packaging engineer is to design packages that increase the flow in the warehouse and eliminate interruptions.

### Transfer Credits:

The Packaging Systems and Design degree offers a lot of flexibility to transfer students to tailor their education and also to allow them to graduate on time. Our **32 free elective credits allow you to transfer classes that you already took** and count it towards your graduation progress. This allows many students to graduate on time even after changing their major.

### Example courses:

- SBIO 2004 – Computer-Aided Design in Packaging
- SBIO 3244 – Packaging Machinery and Production Systems
- SBIO 3264 – Packaging Supply Chains

To learn more about the PSD degree:



[packaging.sbio.vt.edu](https://packaging.sbio.vt.edu)



[packaging@vt.edu](mailto:packaging@vt.edu)

Meet with our professional advisor to learn about the degree requirement and transfer credits.



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