

# **FS 606: Food Packaging Science and Technology**

## **Instructor**

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## **Goal**

Provide the students with a good understanding of food packaging science and technology and their applications.

## **Topics to be covered**

- Overview of Food Packaging
- Structure/Properties of Packaging Materials
- Food Packaging Polymers
- Conversion of Packaging Polymers
- Permeation of Gas and Vapor
- Migration and Food-Package Interactions
- Metal, Glass, and Cellulosic Packaging
- Food Packaging Operations
- Retortable Packaging
- Aseptic Packaging / Vacuum/Modified Atmosphere
- Microwavable Packaging
- Active and Intelligent Packaging
- Controlled Release Packaging
- Food Packaging Development
- Packaging Sustainability

## **Expected outcomes**

After successful completion of this course, the students will have learned the followings:

- How to use the functions/environments model to design food packaging systems.
- How to select appropriate packaging materials based on the requirements of the food product and distribution environment.
- How to identify and solve food packaging problems.
- How to evaluate new and existing technologies for a particular food packaging application.
- How to use the Internet to obtain information (including material specifications, patents, government regulations, and so on) for particular food packaging issues.

### **Assessment**

- Class participation and discussions
- Home assignments
- Mid-term and final exams
- Team projects
- Presentations in class