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