

14:440:301 (Fall, 2016) Introduction to Package Engineering
Packaging Engineering Program, School of Engineering
Rutgers University – New Brunswick, New Jersey

Instructor: Harry Bennett
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Office: Engineering Building, A260
Course Time: Monday 6:40-9:30P
Office Hour: by arrangement
Phones: 732-445-5234
Class Location: SEC 210
Course Website: <http://sakai.rutgers.edu>
Course Descriptions: This course is an introduction to the principles and technologies of packaging. In this context, packaging may not only serve the purpose to contain a product but may serve as a delivery system or even be considered part of the product itself.
Course Objective: Upon completion of the course, students will understand the principles of effect package performance and the technologies to create packaging components.

Course Outline:

Material to be covered:

- What is a package?
- Gain a thorough understanding of the common technologies used to make packaging components.
- Understand how these components are engineered to work together to create a complete package.

Within coverage of these topics areas, we build upon the following critical skills:

- Robust design and engineering
- The need for testing and validation
- Functional Testing and Validation

The course consists of lecture with extensive participation between students and the instructor. Concepts are inter-mingled with practical applications whereby students are challenged to apply an academic concept to real-world context.

Course Schedule:

Week	Description	Guest Speaker
1	Course Introduction, Packaging Overview, Packaging Functions, Branding, Graphic Design, Recent Innovations	H.C. Gea M. Gergus Kumar Nanavati
2	Printing and Decoration	TBD
3	Environmental and Sustainability Issues, Paper and Paper Board	TBD
4	Paperboard Cartons, Metal Cans and Containers	TBD
5	Glass Containers	TBD
6	Polymer Chemistry	TBD

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7	Shaping Plastics	TBD
8	Plastic Applications	TBD
9	Closures	TBD
10	Adhesives & Laminates	TBD
11	Corrugated Fiberboard	TBD
12	Distribution Packaging, Corrugated Box Testing	TBD
13	Packaging Law	TBD
14	Course Review	None
15	Final Exam (Cumulative)	None

Grading Policy:

Class Attendance and participation:	10%
Weekly Quiz:	50%
Final:	40%
Total:	100%

Students are expected to come to class having read the assigned required material, completed the assignment(s), and well prepared to engage in dialogue regarding the assigned material. All reading and other preparatory assignments must be completed by their due date(s).

*** During the semester, there may be some adjustments required in lesson order or assignments. Those will be announced in class and/or on the course website.

In-class Policy: Permitted no electronic devices at hand during lecture periods.

Homework Policy: All assignments to be handed in before due date/time posted.

Exam & Quiz Policy: **NO** open books/notes/computers. **NO** student discussions/ copying/exchanges.