School of Packaging
College of Agriculture and Natural Resources

1. Principles of Packaging
Fall, Spring, Summer. 3(3-0) SA: PKG 210
Packaging systems, materials and forms and their relationship to the needs and wants of society.

2. Packaging with Glass and Metal
Fall, Spring. 3(3-0) P.M. (CEM 141 or CEM 151 or LBS 171) and (PHY 231 or PHY 231B or PHY 231C or PHY 183 or PHY 183A or PHY 183B or PHY 193H or LBS 271) and (PKG 101 or concurrently) SA: PKG 320, PKG 325
Physical and chemical properties of glass and metal and their applications to packaging.

3. Packaging Decision Systems (W)
Fall, Spring. 3(2-2) P.M. (MTH 116 or LBS 117 or MTH 114 or MTH 124 or MTH 132 or LBS 116 or MTH 152H) and completion of Tier I writing requirement R: Open to sophomores or juniors or seniors in the School of Packaging. SA: PKG 415
Application of computers to communicate, analyze and solve problems in the management, specification, production, and testing of packaging systems.

4. Packaging with Paper and Paperboard
Fall, Spring. 4(3-2) P.M. ((PKG 221 or concurrently) and PKG 101) and (MTH 124 or MTH 132 or LBS 116 or MTH 152H) and (CEM 143 or CEM 261 or CEM 351) and (STT 200 or STT 201 or STT 315 or STT 351) R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging. SA: PKG 325
Physical and chemical properties, manufacture, conversion, and use of wood, paper, paperboard, and related components in packaging. Design, use, and evaluation of packages.

5. Packaging with Plastics
Fall, Spring. 4(3-2) P.M. ((PKG 221 or concurrently) and PKG 101) and (MTH 124 or MTH 132 or LBS 116 or MTH 152H) and (CEM 143 or CEM 261 or CEM 351) and (STT 200 or STT 201 or STT 315 or STT 351) and (MTH 124 or MTH 132 or LBS 116 or MTH 152H) R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging. SA: PKG 320
Physical and chemical properties of plastics and their relationship to selection, design, manufacture, performance, and evaluation of packages.

6. Package Printing
Fall, 3(3-0) P.M. PKG 221 R: Open only to sophomores or juniors or seniors in the School of Packaging.
Methods of printing packages including copy preparation, design, electronic imaging, aesthetics, camera use, and effects of package materials. Production of printed packages including quality control, economics, and environmental considerations.

7. Packaging and the Environment
Spring, 3(3-0) P.M. Completion of Tier I writing requirement. RB: CEM 141 or CEM 151 or LBS 164 R: Not open to freshmen or sophomores.

8. Distribution Packaging Dynamics
Fall, Spring. 3(3-0) P.M. PKG 322 and PKG 323 R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging. SA: PKG 310
Identification and measurement of hazards in physical distribution. Methods of protection against climate, shock, vibration, and compression.

9. Packaging Processes
Fall, Spring. 4(3-2) P.M. (PKG 322 and PKG 323) and (PHY 232 or PHY 232B or PHY 232C or LBS 272 or PHY 184 or PHY 182B or PHY 184A or PHY 184B or PHY 294H) R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging.
Integrated study of packaging and production operations, quality control, and organization and control of machines. Interrelationships of products, packaging, machinery layout and efficiency, and quality issues.

10. Robotics and Automotive Packaging
Fall. 3(0-2) P.M. MTH 124 or MTH 132 or LBS 116 or MTH 152H
Robotic systems: configurations, components, drive mechanisms, control and feedback, safety. Line inspection, vision systems, guided vehicle and storage retrieval systems, reusable and expendable packaging, container cleaning and identification and identification and economics.

11. Medical Packaging
Fall, Spring. 4(3-2) P.M. PKG 322 or PKG 323
Special requirements for packaging pharmaceuticals and medical devices. Evaluation of package systems and packaging procedures.

12. Food Packaging
Spring. 3(3-1) P.M. PKG 322 and PKG 323 R: Open only to sophomores or juniors or seniors or graduate students in the Packaging major.
Food packaging systems related to specific products and processes. Product composition: problems and packaging solutions, shelf life considerations, and packaging lines.

13. Distribution Packaging and Performance Testing
Spring. 3(2-2) P.M. PKG 410 R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging.
Interrelationships between packaging and distribution systems. Transportation, material handling, warehousing, Logistics and management systems. Performance testing and industry practices. Package container design and testing.

14. Packaging Economics
Fall. 3(3-0) RB: EC 201 or EC 202
Economic issues in packaging as they relate to policies of the firm and of government. Relationships between economic policy and societal issues.

15. Packaging Laws and Regulations
Spring. 3(3-0) RB: PKG 322 or PKG 323 R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging.
History and development of packaging laws and regulations. Relationships among law, government regulation and commercial regulation. Effect of current laws and regulations on packaging.

16. Packaging Development (W)
Fall, Spring. 4(4-0) P.M: PKG 410 and PKG 415 and PKG 432) and completion of Tier I writing requirement R: Open only to seniors or graduate students in the School of Packaging.
Package development including selection, design and implementation of package systems for protection, distribution, merchandising, use and disposal.

17. Directed Studies in Packaging Problems
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: PKG 322 and PKG 323 R: Open only to sophomores or juniors or seniors or graduate students in the School of Packaging. Approval of department; application required.
Development of solutions to specific packaging problems. Supervised individual study.

18. Special Topics
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. Selected topics of current interest.

19. Senior Seminar
Fall, Spring. 1(0-2) R: Open only to seniors in the Packaging major.
Seminar on current packaging issues, business organization and operations, and accepted practices in a corporate environment.

20. Professional Internship in Packaging
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 6 credits in all enrollments for any or all of these courses: ABB 493, AEE 493, ANR 493, ANS 493, CSS 493, EEP 493, FIM 493, FW 493, HRT 493, PKG 493, PLP 493, PRR 493, and RD 493. Approval of school; application required. P.M: PKG 322 and PKG 323
Supervised professional experience in the field of packaging offered through corporations and other businesses throughout the U.S.

21. Packaging Materials
Fall. 4(4-0) R: Approval of department. Physical and chemical properties of packaging materials; design, manufacture, performance and evaluation of packages.

22. Packaging Machinery, Distribution, and Dynamics
Spring. 4(4-0) P.M: PKG 801 R: Approval of department.
Packaging machinery and line operations, statistical process control. Transportation environment. Distribution packaging design and testing.

23. Advanced Packaging Dynamics
Spring. 3(2-2) RB: PKG 410

24. Packaging for Food Safety
Fall, Spring. 3 credits. Interdepartmental with Veterinary Medicine. Administered by Veterinary Medicine. RB: Enrollment in graduate program in related field. R: Open only to master's students in the Food Safety major or graduate students in the Packaging major or approval of college.
Current issues in packaging and food safety.
815  Permeability and Shelf Life
Spring. 3(2-2) RB: MTH 124Q and MTH 132 and PKG 322 and PKG 323
Relationship between the storage life of packaged food and pharmaceutical products and the gas, moisture, and organic vapor permeability of packages in various environments.

817  Instruments for Analysis of Packaging Materials
Fall of even years. 4(3-2) RB: PKG 322 and PKG 323

827  Polymeric Packaging Materials
Fall. 3(3-0) RB: PKG 323 or PKG 801 SA: PKG 825
Physical and chemical properties of polymeric materials and structures used in packaging. Relationship of properties to performance.

828  Processing and Applications of Packaging Plastics
Spring. 3(3-0)

829  Packaging Plastics Laboratory
Fall. 1(0-2) Not open to students with credit in PKG 825.
Structure versus property relationships and plastics processing.

875  Stability and Recyclability of Packaging Materials
Fall of odd years. 3(3-0) RB: PKG 322 and PKG 323
Interactions between packaging materials and environments: corrosion, degradation, stabilization, and recycling. Impacts of packaging disposal.

888  Master's Project
Fall, Spring, Summer. 2 credits. R: Open only to master's students in the School of Packaging. Approval of school, application required.
Master's degree Plan B project. Completion of a project related to packaging issues.

890  Independent Study in Packaging
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Ph.D. students in the School of Packaging. Approval of department; application required. Special investigations of unique packaging problems.

891  Selected Topics
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in the School of Packaging. Selected topics of interest to graduate packaging students.

899  Master's Thesis Research
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to master's students in the Packaging major. Master's thesis research.