PACKAGING SCIENCE

Bachelor of Science

The Bachelor of Science degree in Packaging Science prepares students for careers in industries producing and utilizing packages for all types of products. Packaging is an essential part of industrialized economies, protecting, preserving, and helping to market products. The field of packaging is highly competitive and highly innovative, requiring an ever-increasing number of professional positions.

Opportunities for employment include a wide variety of career paths such as manufacturing, marketing, sales, design, purchasing, quality assurance, and customer services. Most career opportunities are in positions requiring technical knowledge combined with marketing and management skills.

The core curriculum assures graduates of having the skills and knowledge required by most entry-level packaging positions. Emphasis area choices or minors allow students to select courses to improve career preparation for specific industry segments, including: Distribution, Transportation and Engineering Technology; Food, Nutrition and Packaging Materials; and Package Design and Graphics. Alternatively, any University-approved minor may be completed.

Students changing majors into Packaging Science must:
1. have an overall minimum GPA of 2.0; and
2. have completed four of the following courses with an average GPA of 2.7:
   - BIOL 1030, 1040, CH 1010, 1020, MATH 1060, PHYS 1220, 2070, 2080, 2210; or both MATH 1040 and 1070; and
3. have completed PKSC 1020 with a grade of B or higher.

Combined Bachelor of Science/Master of Science Degree Program

The Department of Food, Nutrition and Packaging Sciences also offers an accelerated five-year combined bachelor’s/master’s program that allows students to count up to twelve hours of graduate credit toward both the BS degree in Packaging Science and the MS degree in Packaging Science. Details are available from the Department of Food, Nutrition and Packaging Sciences or at www.clemson.edu/fnps.

Freshman Year

First Semester
3 - BIOL 1030 General Biology I
1 - BIOL 1050 General Biology Lab. I
4 - CH 1010 General Chemistry
4 - MATH 1060 Calculus of One Variable I
1 - PKSC 1010 Packaging Orientation
3 - Social Science Requirement

Second Semester
3 - BIOL 1040 General Biology II
1 - BIOL 1060 General Biology Lab. II
4 - CH 1020 General Chemistry
4 - COMM 1500 Intro to Human Comm or COMM 2500 Public Speaking
3 - ENGL 1030 Composition and Rhetoric
2 - PKSC 1020 Intro. to Packaging Science

Sophomore Year

First Semester
3 - CH 2010 Survey of Organic Chemistry and
1 - CH 2020 Survey of Organic Chemistry Lab. or
3 - CH 2230 Organic Chemistry and
1 - CH 2270 Organic Chemistry Lab.
3 - PHYS 1220 Physics with Calculus I and
1 - PHYS 1240 Physics Lab. I or
3 - PHYS 2070 General Physics I and
1 - PHYS 2090 General Physics I Lab.
4 - PKSC 2020 Packaging Materials and Manufact.
4 - PKSC 2200 Product/Package Design and Prototyping

Second Semester
3 - PHYS 2080 General Physics II and
1 - PHYS 2120 General Physics II Lab. or
3 - PHYS 2210 Physics with Calculus II and
1 - PHYS 2230 Physics Lab. II
3 - PKSC 2010 Packaging Perishable Products
3 - PKSC 2040 Container Systems
3 - PKSC 2060 Container Systems Lab.
3 - Arts and Humanities (Literature) Requirement

Summer
0 - COOP 1010 Cooperative Education

Junior Year

First Semester
3 - ENGL 3140 Technical Writing
4 - GC 1030 Graphic Comm. I for Packaging Sci.
3 - PKSC 4010 Packaging Machinery
3 - PKSC 4040 Mechanical Properties of Packages and Principles of Protective Packaging
1 - PKSC 4540 Product and Package Eval. Lab.
1 - Emphasis Area Requirement

Second Semester
3 - PKSC 3200 Package Design Theory
3 - PKSC 3680 Packaging and Society
3 - PKSC 4300 Converting for Flexible Packaging
3 - PKSC 4400 Packaging for Distribution
3 - Emphasis Area Requirement

Senior Year

First Semester
4 - PKSC 4160 Appl. of Polymers in Packaging
4 - PKSC 4640 Food and Health Care Pkg. Syst.
3 - STAT 2300 Statistical Methods I
3 - Emphasis Area Requirement

Second Semester
3 - AGRIB 2020 Agricultural Economics or
3 - ECON 2110 Principles of Microeconomics
1 - PKSC 4030 Packaging Career Preparation
3 - PKSC 4200 Package Design and Development
3 - Arts and Humanities (Non-Lit.) Requirement
6 - Emphasis Area Requirement

Total Semester Hours
16 24

Note:
1. have an overall minimum GPA of 2.0; and
2. have completed four of the following courses with an average GPA of 2.7:
   - BIOL 1030, 1040, CH 1010, 1020, MATH 1060, PHYS 1220, 2070, 2080, 2210; or both MATH 1040 and 1070; and
3. have completed PKSC 1020 with a grade of B or higher.

PLANT AND ENVIRONMENTAL SCIENCES

Bachelor of Science

The BS degree program in Plant and Environmental Sciences is a multidisciplinary program that educates students with expertise in soils, crop sciences, and applied agricultural biotechnology. It offers students a rigorous, science-based degree with educational opportunities related to management of agricultural commodities and natural resources, as well as soil and water resources. Students can tailor the program to fit their professional and academic goals by selecting one of three concentrations.

The Agricultural Biotechnology Concentration integrates conventional disciplines with molecular advances in plants, pathogens, and biosystem interactions and responds to the educational void between the rapid adoption of biotechnology products into agricultural production and the intermediate- and end-users, farmers, and consumers. Graduates in this concentration will be competitive as scientists in emerging agricultural biotechnology industries, as educators, and as policy makers and officers in regulatory agencies.

Students with a concentration in Agronomy will graduate with comprehensive knowledge to increase farm profits by decreasing the costs of crop production; build soil fertility and productivity through amelioration, multiple cropping, and nutrient cycling; protect the environment by minimizing or more efficiently using synthetic agichemicals; manage crop pests and weeds with integrated, ecologically sound strategies; develop strategies for profitable marketing of agricultural commodities; and create a strong, diversified agriculture that is stable through market and weather fluctuations. Graduates can assume positions as self-