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 Technology; Food, and Health Care 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 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
1. BIOL 1030 General Biology I
2. BIOL 1050 General Biology Lab. I
3. MATH 1010 General Chemistry
4. MATH 1060 Calculus of One Variable I
5. PKSC 1010 Packaging Orientation1
6. Social Science Requirement2

Second Semester
1. BIOL 1040 General Biology II
2. BIOL 1060 General Biology Lab. II
3. CH 1020 General Chemistry
4. COMM 2500 Public Speaking
5. ENGL 1030 Accelerated Composition
6. PKSC 1020 Intro. to Packaging Science1

Sophomore Year

First Semester
1. CH 2010 Survey of Organic Chemistry and
2. BIOL 2020 Survey of Organic Chemistry Lab. or
3. CH 2230 Organic Chemistry and
4. CH 2270 Organic Chemistry Lab.
5. PHYS 1220 Physics with Calculus I and
6. PHYS 1240 Physics Lab. II or
7. PHYS 2070 General Physics I and
8. PHYS 2090 General Physics I Lab.
9. PKSC 2020 Packaging Materials and Manuf.1
10. PKSC 2200 Product/Package Design and Prototyping1

Second Semester
1. PHYS 2080 General Physics II and
2. PHYS 2100 General Physics II Lab. or
3. PHYS 2210 Physics with Calculus II and
4. PHYS 2230 Physics Lab. II
5. PKSC 2010 Packaging Perishable Products1
6. PKSC 2040 Container Systems1
7. PKSC 2060 Container Systems Lab.1
8. Arts and Humanities (Literature) Requirement2

Junior Year

First Semester
1. ENGL 3140 Technical Writing
2. GC 1030 Graphic Comm. I for Packaging Sci.
3. PKSC 4010 Packaging Machinery1
4. PKSC 4040 Mechanical Properties of Packages and Principles of Protective Packaging1,5
5. PKSC 4540 Product and Package Eval. Lab.1,5
6. Emphasis Area Requirement6

Second Semester
1. PKSC 3200 Package Design Theory1
2. PKSC 3680 Packaging and Society1
3. PKSC 4300 Converting for Flexible Packaging1
4. PKSC 4400 Packaging for Distribution1
5. STAT 2300 Statistical Methods I
6. Emphasis Area Requirement6

Summer
1. COOP 1010 Cooperative Education6

Senior Year

First Semester
1. PKSC 4160 Appl. of Polymers in Packaging1
2. PKSC 4640 Food and Health Care Pkg. Syst.1
3. STAT 3300 Statistical Methods II
4. Emphasis Area Requirement6

Second Semester
1. AGRB 2020 Agricultural Economics or
2. ECON 2110 Principles of Microeconomics
3. PKSC 4030 Packaging Career Preparation1
4. PKSC 4200 Package Design and Development1
5. Arts and Humanities (Non-Lit.) Requirement2
6. Emphasis Area Requirement6

78 Total Semester Hours

Note:
1. Students must achieve a minimum grade of C or better in all required courses in order to graduate.
2. Additional emphasis area courses may be approved by emphasis area advisors.
3. At least one 15-week period of 40 hour workweeks of Cooperative Education is required. A six-month period is preferred. Two 10-week summer periods of 40 hours each with the same company is an option.
4. A six-month period is preferred. Two 10-week summer periods of 40 hours each with the same company is an option.
5. Completion of any emphasis area or university approved minor is required. The approved course list of the four emphasis areas is available in the undergraduate student handbook or the department office. Emphasis areas consist of 15 credit hours selected from one of the following areas (additional emphasis area courses may be approved by emphasis area coordinators).

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, pathogen, and ecosystem 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.