

# College of Agriculture and Life Sciences

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Agriculture is a diverse industry that touches all of us in many ways. The life sciences provide foundations for studying life and the role of plants and animals in the environment. Academic programs in the college represent a unique blending of the agriculture and life sciences. The College of Agriculture and Life Sciences (CALS) offers specialized majors in agriculture and life sciences that prepares graduates for fulfilling careers in industry, academia, government, or nonprofits, or for graduate or professional programs.

The goals of the instructional programs in CALS include providing relevant, scientific, and practical knowledge of the food, agricultural, and life sciences to its students. With the support of highly qualified and accomplished faculty, students are able to achieve their greatest personal and professional potential. Central to the college's goals is the cultivation of interdisciplinary problem-solving skills that will serve its graduates well as they pursue a lifetime of learning and professional experiences.

What sets our college apart:

- Student activities such as the representing your college and serving on the Agri-Life Council or becoming a CALS Ambassador and gaining professional and hands-on experience in the agriculture and life sciences world
- Nationally-recognized honors societies that allow academically-strong students to further their education
- Honors Program inspires students to take ownership of their education, explore their passions and pursue their academic goals beyond the classroom
- Approximately 620 scholarships awarded to CALS students each year based on merit, financial need, academic major and/or outside interests

For more information about our college, including contact information, visit our website (<https://cals.ncsu.edu/>).

## Contact

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[cals\\_programs@ncsu.edu](mailto:cals_programs@ncsu.edu)

## Faculty

### Dean and Executive Director for Agricultural Programs

Richard H. Linton

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### Senior Associate Dean for Administration

Harry Daniels

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### Associate Dean and Director of Academic Programs

John M. Dole

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### Associate Dean and Director, NC Agricultural Research Service

Steven A. Lommel

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### Associate Dean and Director of NC Cooperative Extension

A. Richard Bonanno

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### Assistant Dean of College Advancement

Sonia Murphy

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### Executive Director of NC Agricultural, Dairy, and Tobacco Foundations

Kathy Kennel

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### Assistant Dean for Business Operations

Joyce L. Munro

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### Assistant Dean of CALS Human Resources

Rebecca B. Zuvich

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### Chief Communications Officer, CALS Communications

Richard Campbell

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### Interim Director of CALS Office of Diversity Affairs

Alex K. Graves

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### Director, Agricultural Institute and Assistant Director of Academic Programs

Robert Ivy

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## Director, Information Technology

Kevin F. Lee

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## Director of Student Services

Tricia M. Buddin

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## Assistant Director of Academic Programs

Kimberly Allen

## Departments

- Agricultural Institute (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/>)
- Department of Agricultural and Human Sciences (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/>)
- Department of Agricultural and Resource Economics (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/>)
- Department of Animal Science (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/>)
- Department of Applied Ecology (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/applied-ecology/>)
- Department of Biological and Agricultural Engineering (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/>)
- Department of Crop and Soil Sciences (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/>)
- Department of Entomology and Plant Pathology (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/entomology-plant-pathology/>)
- Department of Food, Bioprocessing and Nutrition Sciences (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/>)
- Department of Horticultural Science (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/>)
- Department of Molecular and Structural Biochemistry (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/molecular-structural-biochemistry/>)
- Department of Plant and Microbial Biology (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/plant-microbial-biology/>)
- Life Sciences First Year (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/life-sciences-first-year/>)
- North Carolina Cooperative Extension Service (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/northcarolinacooperativeextensionsservice/>)
- Prestage Department of Poultry Science (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/poultry-science/>)

## Majors

- Agribusiness Management (AAS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/agribusiness-management-aas/>)
- Agricultural Business Management (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/agricultural-business-management-bs/>)
- Agricultural Business Management (BS): Biological Sciences Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/agricultural-business-management-bs-biological-sciences-concentration/>)
- Agricultural Education (BS): Agricultural Business Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-agricultural-business-concentration/>)
- Agricultural Education (BS): Agricultural Engineering Technology Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-agricultural-engineering-technology-concentration/>)
- Agricultural Education (BS): Agronomy Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-agronomy-concentration/>)
- Agricultural Education (BS): Animal Science Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-animal-science-concentration/>)
- Agricultural Education (BS): Horticultural Science Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-horticultural-science-concentration/>)
- Agricultural Education (BS): Natural Resources Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-natural-resources-concentration/>)
- Agricultural Education (BS): Poultry Science Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-education-bs-poultry-science-concentration/>)
- Agricultural Science (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-science-bs/>)
- Agroecology & Sustainable Food Systems (BS): Agroecology Research & Production Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/agroecology-sustainable-food-systems-bs-agroecology-research-production-concentration/>)
- Agroecology & Sustainable Food Systems (BS): Community Food Systems Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/agroecology-sustainable-food-systems-bs-community-food-systems-concentration/>)
- Agroecology & Sustainable Food Systems (BS): Urban Horticulture Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/agroecology-sustainable-food-systems-bs-urban-horticulture-concentration/>)
- Animal Science (BS): Industry Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/animal-science-bs-industry-concentration/>)

- Animal Science (BS): Science Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/animal-science-bs-science-concentration/>)
- Animal Science (BS): Veterinary Bioscience Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/animal-science-bs-veterinary-bioscience-concentration/>)
- Biochemistry (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/molecular-structural-biochemistry/biochemistry-bs/>)
- Biological and Agricultural Engineering Technology (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-agricultural-engineering-technology-bs/>)
- Biological and Agricultural Engineering Technology (BS): Agricultural Systems Management Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-agricultural-engineering-technology-bs-agricultural-systems-management-concentration/>)
- Biological and Agricultural Engineering Technology (BS): Environmental Systems Management Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-agricultural-engineering-technology-bs-environmental-systems-management-concentration/>)
- Biological Engineering (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs/>)
- Biological Engineering (BS): Agricultural Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-agricultural-engineering-concentration/>)
- Biological Engineering (BS): Bioprocessing Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-bioprocessing-engineering-concentration/>)
- Biological Engineering (BS): Ecological Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-ecological-engineering-concentration/>)
- Biological Engineering (BS): Environmental Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-environmental-engineering-concentration/>)
- Bioprocessing Science (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/bioprocessing-science-bs/>)
- Crop and Soil Sciences (BS): Agronomy (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/crop-soil-sciences-bs-agronomy/>)
- Crop and Soil Sciences (BS): Crop Biotechnology (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/crop-soil-sciences-bs-crop-biotechnology-semester/>)
- Crop and Soil Sciences (BS): Soil Science (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/crop-soil-sciences-bs-soil-science/>)
- Crop and Soil Sciences (BS): Turfgrass Science (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/turfgrass-science-bs/>)
- Department of Agricultural and Human Sciences (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/>)
- Field Crops Technology (AAS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/field-crops-technology-aas/>)
- Food Science (BS): Science Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/food-science-bs-science-concentration/>)
- Food Science (BS): Technology Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/food-science-bs-technology-concentration/>)
- General Agriculture (AAS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/general-agriculture-aas/>)
- Horticultural Science (BS): Landscape Design, Gardens & Urban Environments Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/horticultural-science-bs-landscape-design-gardens-urban-environments-concentration/>)
- Horticultural Science (BS): Plant Breeding and Biotechnology in Horticulture Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/horticultural-science-bs-plant-breeding-biotechnology-horticulture-concentration/>)
- Horticultural Science (BS): Production Systems and Entrepreneurship in Horticulture Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/horticultural-science-bs-production-systems-entrepreneurship-horticulture-concentration/>)
- Horticultural Science Management (AAS): Ornamentals and Landscape Technology Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/horticultural-science-management-aas-ornamentals-landscape-technology-concentration/>)
- Horticultural Science Management (AAS): Small Scale Farming Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/horticultural-science-management-aas-small-scale-farming-concentration/>)
- Life Sciences First Year (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/life-sciences-first-year/>)
- Livestock and Poultry Management (AAS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/livestock-poultry-management-aas/>)
- Natural Resources (BS): Soil, Water and Land Use Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/natural-resources-bs-soil-water-land-use-concentration/>)
- Nutrition Sciences (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/nutrition-sciences-bs/>)
- Nutrition Sciences (BS): Applied Nutrition Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/nutrition-sciences-bs-applied-nutrition-concentration/>)
- Plant Biology (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/plant-microbial-biology/plant-biology-bs/>)
- Poultry Science (BS): Science Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/poultry-science/poultry-science-bs-science-concentration/>)
- Poultry Science (BS): Technology Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/poultry-science/poultry-science-bs-technology-concentration/>)

- Turfgrass Management (AAS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/turfgrass-management-aas/>)

## Minors

- Agricultural Business Management (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/agricultural-business-management-minor/>)
- Agricultural Entrepreneurship (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/agricultural-entrepreneurship-minor/>)
- Agroecology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/agroecology-minor/>)
- Animal Science (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/animal-science-minor/>)
- Applied Ecology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/applied-ecology/applied-ecology-minor/>)
- Biological and Agricultural Engineering Technology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/agricultural-environmental-technology-minor/>)
- Biotechnology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/plant-microbial-biology/biotechnology-minor/>)
- Brewing Science and Technology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/brewing-science-technology-minor/>)
- Crop Science (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/crop-science-minor/>)
- Entomology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/entomology-plant-pathology/entomology-minor/>)
- Extension Education (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/extension-education-minor/>)
- Feed Milling (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/poultry-science/feed-milling-minor/>)
- Food Science (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/food-science-minor/>)
- Horticultural Science (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/horticultural-science-minor/>)
- Leadership in Agriculture and Life Sciences (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/leadership-agriculture-life-sciences-minor/>)
- Nutrition (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/nutrition-minor/>)
- Plant Biology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/plant-microbial-biology/plant-biology-minor/>)
- Poultry Science (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/poultry-science/poultry-science-minor/>)
- Soil Science (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/soil-science-minor/>)
- Turfgrass (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/turfgrass-minor/>)

## Certificates

- Agribusiness Management (Certificate) (Distance Education) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-institute/agribusiness-management-certificate-distance-education/>)
- Agricultural Business Management (Certificate) (For Post-Baccalaureate Students, Distance Education) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/agricultural-business-management-certificate-post-baccalaureate-students-distance-education/>)
- Agricultural Business Management (Certificate) (Non Post-Baccalaureate Students, Distance Education) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-resource-economics/agricultural-business-management-certificate-distance-education/>)
- Agricultural Leadership (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/agricultural-human-sciences/agricultural-leadership-certificate/>)
- Animal Nutrition (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/animal-nutrition-certificate/>)
- Crop Science Certificate (Distance Education) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/crop-science-certificate-distance-education/>)
- Feed Milling (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/poultry-science/feed-milling-certificate/>)
- Field Botany (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/plant-microbial-biology/field-botany-certificate/>)
- Food Safety & Quality Management (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/food-bioprocessing-nutrition-science/food-safety-quality-management-certificate/>)
- Fundamentals of Entomology (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/entomology-plant-pathology/fundamentals-entomology-certificate/>)
- Horticulture (Undergraduate Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/horticultural-science/horticulture-undergraduate-certificate/>)
- Plant Pests, Pathogens, and People (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/entomology-plant-pathology/plant-pests-pathogens-people-certificate/>)
- Regulatory Science in Agriculture (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/ag-regulatory-science-certificate/>)
- Soil Science (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/crop-soil-sciences/soil-science-certificate/>)
- Swine Science (Certificate) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/animal-science/swine-science-certificate/>)