



# **“Road Map” To Academic Excellence**

**A Strategic Plan**  
**Department of Food Science and Human Nutrition**  
**Clemson University**  
[www.clemson.edu/foodscience](http://www.clemson.edu/foodscience)

**“Focused, Positive, and Doing Great Things Together”**



## Table of Contents

Executive Summary.....	3
Vision .....	5
Mission.....	5
Plan.....	5
Core Department Initiatives .....	5
Culinary Science (Targeted for Diversity Enhancement) .....	5
Food Safety and Quality.....	5
Human Nutrition .....	5
Entrepreneurial Innovation.....	5
Biomedicine .....	5
Academic Resource Needs in Support of Top 20 Pursuit.....	5
Investments in Faculty and Staff.....	5
Investments in Operating Resources .....	6
Investments in Research & Graduate Programs.....	6
Investments in Information Resources.....	6
Unique FSHN Programs and Collaborations .....	7
Professional Development Portfolio for Students.....	7
Discovery Lab for Nutraceuticals and Bioactive Compounds.....	7
Food Films Research Group.....	7
Academy for Food Business Entrepreneurs .....	7
Food Stamp Nutrition Education (LINC).....	7
Food Safety, Quality and Microbiology Research Group.....	7
Culinary Science .....	7
Disease Prevention Research Group .....	7
MicroCreamery .....	7
Summary of Departmental Performance Activity.....	8
Goals, Strategies, Outcomes, Progress.....	8

## Executive Summary

The Food Science and Human Nutrition Department started its strategic planning activities in August 2001, with the objective to ensure alignment of Departmental plans with the University goals. The following nine guiding principles were used to develop the plan:

- Realistic – achievable
- Focused
- Creative
- Defined performance measures
- Based on core competencies but not limited or restricted by current core competencies
- Nationally and internationally competitive
- Value diversity
- Open discussion
- Team effort – All faculty fully engaged.

The Food Science and Human Nutrition Team worked five months in a collaborative spirit to develop the “Road Map to Academic Excellence.” This Road Map represents a consensus that all faculty support.

The department is focused on five core initiatives:

- Culinary Science (targeted for diversity enhancement)
- Food Safety and Quality
- Human Nutrition
- Entrepreneurial Innovation
- Biomedicine.

The department is creating an impact in these initiatives. Examples of accomplishments include but are not limited to the following:

- Providing nutrition education to South Carolinians through the LINC program
- Developing new films for preserving, packaging and transporting food products
- Developing rapid methods for the detection of food borne pathogens
- Collaborating with CAFLS and CES on international exchanges

New initiatives have started on a number of research efforts including:

- Investigating the use of essential oils to inhibit the growth of food pathogens
- Developing the Discovery Lab for Nutraceuticals and Bioactive compounds
- Integrating the teaching of Culinary Science with Human Nutrition and Food Science.

The Team is active in contributing to success of the University. Examples of these accomplishments for the 2001-2002 academic year include:

- Funding activity greater than \$10 million.
- Publications, 43
- Abstracts, 27
- Acceptance rate for dietetic internships 100% (national rate is 74%)
- Pass rate on Registered Dietetics examination 100% (national rate is 80%)
- National rank in student competition, 4<sup>th</sup>
- Freshman GPA, 3.05
- Percent of students on President's list, 21%
- Percent of students on Dean's list, 19%
- 68 undergraduate students, and 12 graduate students.

Ten faculty, one extension associate, two instructors, four technical staff, and 1.6 Administrative staff accomplished this effort.

Resources are necessary to ensure continued success of programs and to assist Clemson in meeting its goal of being a top 20 public university. This will require a collaborative effort from the Food Science and Human Nutrition Team and the University. Outside resources needed include:

- Support to retain TERIed faculty at a 50% appointment
- Create three new faculty positions and two new academic support positions.
- Obtain seed funding of \$207,000 for new programs
- Obtain \$410,000 in funding for necessary capital improvements
- Obtain \$100,000 to match department self-generated revenues to support graduate students.
- Obtain \$10,000 to enhance computer technology for the Nutritional Information Resource Center.

These efforts demonstrate that the Food Science and Human Nutrition Team is **focused, positive and doing great things together.**

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***"Clemson will be one of the nation's top 20 public universities."***

In response to our Board of Trustees' challenge to be a top 20 public university, faculties in the **Department of Food Science and Human Nutrition** have established this working document that outlines our Vision, Mission and Plans for contributing to Clemson's efforts of sustained achievement that will result in recognition as a top 20 public university.

## **Vision**

Improving lives through 21<sup>st</sup> century leadership in food technology, culinary science, and human nutrition.

## **Mission**

The Department of Food Science and Human Nutrition is dedicated to the continuing development and practice of creative teaching, innovative research and high impact public service programs that improve food safety, food quality and human nutrition. Cutting edge leadership in food technology, culinary science and human nutrition will provide the tools and education for advancing the food industry and improving the quality of life to people in South Carolina, the nation and the global community.

## **Plan**

### Core Department Initiatives

Culinary Science (Targeted for Diversity Enhancement)  
Food Safety and Quality  
Human Nutrition  
Entrepreneurial Innovation  
Biomedicine

### Academic Resource Needs in Support of Top 20 Pursuit

#### Investments in Faculty and Staff

New Faculty Positions (Emphasis Areas)  
Retain TERIed faculty at 50% appointment  
Nutrition  
    Biomedical, chemistry, biochemistry (Biomedical)  
    Public health (Nutrition)  
Food Technology  
    New processing technology (Food Safety and Quality)  
    Physical properties (Food Quality)  
Nutrition and Food Technology Bridge  
    Culinary instructor (Diversity Initiative, Nutrition, Food Quality)

Physiology and sensory (Biomedical, Sports Sci., Nutrition, Food Quality)  
Academic Support

Internship director and nutrition instructor

MicroCreamery manager and instructor

Other Programs

PRTM – food service management, therapeutic recreation

Micobiology – molecular pathogenic, industrial fermentation

AVS – basic nutritionist

Agricultural and Biological Engineering – Food engineering and bio processing

#### Investments in Operating Resources

Seed Funding for New Programs

Culinary Science (Diversity Initiative) - \$ 50,000

Dietetic Graduate Internship Program - \$ 25,000

Pocket PC and Electronic Student Portfolio - \$ 5,000

Discovery Lab for Nutraceuticals and Bioactive Compounds - \$ 50,000

Food Packaging Films Group - \$ 77,000

Capital Improvements and Equipment

Culinary Science (Diversity Initiative) – \$ 100,000

Pocket PC and Electronic Student Portfolio – \$ 25,000

Discovery Lab for Nutraceuticals and Bioactive Compounds - \$ 150,000

Food Packaging Films Group - \$ 35,000

Basic laboratory needs - \$ 100,000

Academic Support Positions

Technology Support Positions

#### Investments in Research & Graduate Programs

Graduate Student Support

University match to department self-generated revenue - \$ 100,000

Research Services and Compliance

#### Investments in Information Resources

Nutrition Information Resource Center – Computer technology - \$ 10,000

## Unique FSHN Programs and Collaborations

### Professional Development Portfolio for Students

American Dietetics Association

### Discovery Lab for Nutraceuticals and Bioactive Compounds

Plant Pathology; Entomology, Horticulture, Biological sciences

### Food Films Research Group

Chemical Engineering

### Academy for Food Business Entrepreneurs

Spiro Center, Pearce Center, MicroCreamery, Sensory Lab, and PSA Extension

### Food Stamp Nutrition Education (LINC)

NIRC, County Extension Programs, School Districts, SC Food Bank, Association, DSS, Council on Aging, the Sullivan Center, Winthrop, SC Anti-Hunger Network

### Food Safety, Quality and Microbiology Research Group

Biological sciences, AVS, PSA Food Safety Institute

### Culinary Science

ARAMARK Corporation, School Districts, Technical Colleges, Johnson & Wales

### Disease Prevention Research Group

College of Health, Education, and Human Development

### International Programs

College of Agriculture, Forestry and Life Sciences; ESA Angers, France; College of Engineering and Science; Danish Technical University

### MicroCreamery

Campus-wide collaboration.

Summary of Departmental Performance Activity

	01 – 02 fiscal year*	00 – 01 fiscal year
Funding Activity*/Awards (#):	\$ 10,511,635.00 (64)	\$1,314,196.00
Publications (in print and in review):	43	26
abstracts:	27	
Acceptance rate for dietetic internships:	100%	100%
Pass rate on RD exam:	100%	100%
National rank in student competition:	4th	8th
Freshman GPA:	3.05	2.93
President’s list:	21%	
Dean’s list:	19%	
Undergraduate students:	68	60
Graduate students:	12	19
Tenure Track Faculty:	10 (2 TERIed)	8
Extension Associates:	1	1
Instructors:	2	1
Technical Staff:	4	4
Administrative Staff:	1.6	2

Goals, Strategies, Outcomes, Progress

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Excel in teaching, at both the undergraduate and graduate levels.</b>	Excel in teaching, at both the undergraduate and graduate levels	Perform an assessment of current instructional needs through survey of alumni, employers, students, and faculty.	Complete summary report of assessment that makes recommendations for updating curriculum, etc.	
		Each year all faculty will participate in at least one continuing education activity to improve their teaching.	Faculty will share their experiences at faculty meetings.	
		All faculty will invite at least two other department faculty members to attend their class.	Faculty will give feedback on their observations to the teaching faculty.	
		Conduct focus groups with students from each student class on teaching effectiveness.	Present summary report to faculty.	
		Track Student Achievement: 1) dietetic internship placement rates 2) pass rates on RD exam 3) national dairy products judging competition 4) GPA of freshman in FSHN.	1) > 75% placement in dietetic internships 2) > 80% pass rate on RD exam 3) top ten national ranking in dairy products judging competition, 4) freshman GPA >2.75	2001- 2) 6 of 6 passed (78% national rate
	Increase number of undergraduate students in Food Science program to 100+ in 5 years.	Target recruiting activities to high schools that traditionally send the largest numbers of students to Clemson.	Increase number of high school students accepting admission to FSHN to 20+ per freshman class.	
		Target minorities for culinary science option.	Increase number of minority students accepting admission to FSHN to 5+ per freshman class.	17% of the 2005 class are minority.
	Engage faculty, students, and alumni in recruiting efforts.	Each faculty member will write a personal congratulatory note to students accepted into the FSHN program.		

Members of the FSHN student advisory councils will write a personal note to students accepted into the FSHN program.	
Alumni will visit target high schools to discuss career options in FSHN.	

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Increase research and sponsored programs to exceed \$100 million a year in research support.</b>	Increase research and sponsored programs to exceed \$2 million a year in research support.	Identify teaching, service and scientific research focus areas.	Allocate internal resources to support focus areas.	
		Each faculty member will apply for extramural funding relative to his or her assignment.	At least 50 proposals will be submitted through the department annually.	
		Faculty will present a graduate student workshop on grant writing.	Each graduate student will be required to prepare an extramural funding proposal.	
		Increase self-generated revenue to levels that will support at least one Ph.D. student per faculty member.	Execute detailed business plans for MicroCreamery.	
			Create detailed business plans for increasing revenue through the amino acid and sensory evaluation laboratory.	
			Generate \$ 200,000 annually in self generated funds (MicroCreamery, amino acid lab, sensory lab) for graduate student stipend support.	

University Goals	Department Goals	Strategies	Outcomes	Progress
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<b>Seek and cultivate areas where teaching, research and service overlap.</b>	Seek and cultivate areas where teaching, research and service overlap.	Develop and promote the Academy for Food Business Entrepreneurs.	Cultivate collaborations with Spiro Entrepreneurial Center, Pearce Center for Communication and MicroCreamery.	
			20 entrepreneurs will participate in a fall and spring short course.	
			Each graduate student will participate in at least one service (consulting) project assignment.	
			Update dept. web page for online feedback to entrepreneurs.	

<b>University Goals</b>	<b>Department Goals</b>	<b>Strategies</b>	<b>Outcomes</b>	<b>Progress</b>
<b>Recognize and appreciate Clemson's distinctiveness.</b>	Recognize and appreciate Clemson's distinctiveness.	Market the creation of the student managed and operated MicroCreamery.	Increase awareness of career opportunities in Food Science with Clemson alumni.	
			FSHN students will develop and market new product creations with a Clemson focus.	

<b>University Goals</b>	<b>Department Goals</b>	<b>Strategies</b>	<b>Outcomes</b>	<b>Progress</b>
<b>Strengthen our sense of community and increase our diversity</b>	Strengthen our sense of community and increase our diversity	Increase diversity by marketing the renaming of the graduate program with the addition of culinary science options into the undergraduate and graduate programs.	Develop benchmark for diversity contacts and track.	
		Expand and develop the culinary science academic and research programs.	Target the hiring of a minority instructor in the culinary science field that has an interest in pursuing a Ph.D. in food technology.	Concept presented to dean and provost. Received positive response.

	Receive other laboratory space in P&A for combining amino acid lab facilities with Discovery Lab for Nutraceuticals and Bioactive Compounds.	Collaboration initiated with horticulture. Presented to dean and provost as part of diversity initiative. Received positive response.
	Receive \$ 100,000 in university funding to renovate the old amino acid lab into a culinary science laboratory.	Presented to dean and provost as part of diversity initiative. Received positive response.
	Receive \$50,000 in external support for renovation of lab space into culinary science laboratory space.	Potential corporate donor has been identified.
Create minority support system through department, college and university collaboration.	Meet quarterly to review effectiveness.	
Strengthen community participation in student lead nutrition awareness.	Track participation and number of media publications on "Race to Beat Diabetes".	

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Create greater awareness of international programs and increase activity in this area.</b>	Create greater awareness of international programs and increase activity in this area.	Create a program to foster international undergraduate, graduate, and faculty exchanges.	Develop a international exchange program in Europe	Successful collaboration initiated with Danish Tech University.
			Develop a international exchange program in Latin America	

50% of the faculty will participate in an international teaching, research or public service exchange.
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University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Promote high graduation rates through increasing freshman retention, meeting expectations of high achievers and providing support systems for all students.</b>	Promote high graduation rates through increasing freshman retention, meeting expectations of high achievers and providing support systems for all students.	Create professional development program for students with emphasis on communication and solving problems.	Students will meet employer requirements for job offers.	
		Each faculty member will be an active participant in the support of student activities.	Increase faculty student interaction.	
		Identify high achievers to challenge for advanced scholarship programs.	At least one student will be accepted into an advanced scholarship program.	

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Promote excellence in advising.</b>	Promote excellence in advising.	Survey students on their advising experience.	Present summary report to faculty.	

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Increase the annual number of doctoral graduates to the level of a top-20 public research university.</b>	Increase the annual number of doctoral graduates to the level of a top-20 public research university.	In collaboration with AVS and Bios (micro), promote and market the renaming of the Animal and Food Industries MS program to an interdisciplinary MS program in Food, Nutrition, and Culinary Science.	Grow the MS program to an average of 30 students and strengthen link between the MS and Ph.D. programs	
		Identify outstanding students in Food, Nutrition and Culinary Science MS program for recruitment into Ph.D. Food Technology program.	Sponsor student activity to introduce students to the benefits of a Ph.D. program degree.	

Develop a dietetic internship program in the renamed MS program.	Accept 5 students into the dietetics internship program each year.	
Grow self-generated funding to supplement graduate assistantships.	Sufficient funds will be generated that enable each faculty member to have at least one nationally competitive Ph.D. graduate research assistantship.	
Identify outstanding students at scientific meetings for recruitment into graduate program.	Increase number of students applying for graduate program.	

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Successfully complete our current capital campaign and subsequent one.</b>	Develop a formalized capital campaign.	Continue capital campaign for MicroCreamery.	Generate \$ 5 million in private funding.	
		Develop a capital campaign targeting dept. alumni.	> 20% of alumni participation.	
			100% participation by dept. faculty and currently enrolled students.	

University Goals	Department Goals	Strategies	Outcomes	Progress
<b>Promote high integrity and professional demeanor among all members of the University community.</b>	Promote high integrity and professional demeanor among all members of the University community.	Faculty meeting to identify target areas.	50% of faculty will present research and/or scholarship findings at an international conference.	
			100% of faculty will present research or scholarship findings at a national conference.	
			100% of faculty will participate on a national committee.	

25% of faculty will participate on an international committee.	
100% of the graduate students will present research or scholarship findings at a national conference.	
25% of the graduate students will present research and/or scholarship findings at an international conference.	

<b>University Goals</b>	<b>Department Goals</b>	<b>Strategies</b>	<b>Outcomes</b>	<b>Progress</b>
<b>Publicize both national and international accomplishments of faculty, staff and students.</b>	Publicize both national and international accomplishments of faculty, staff and students.			