

ATTACHMENT 1A

Academic Policy Series

1622.20A

ADD, CHANGE OR DELETE UNIT, PROGRAM REQUIREMENTS, OR ACADEMIC POLICIES

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit or to change program policies. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair Date Submitted Graduate Council Chair Date
College Dean Date Faculty Senate Chair Date
Honors College Dean Date Provost Date
Core Curriculum Committee Date Board of Trustees Approval/Notification Date
University Course and Programs Committee Date Arkansas Higher Education Coordinating Board Approval/Notification Date

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: X Major/Field of Study [] Minor [X] Other Unit (Food and Culinary Concentration) [] Policy
Level: [X] Undergraduate [] Graduate [] Law Effective Catalog Year 2011

Program changes are effective with the next available catalog. See Academic Policy Series 1622.20

Current Name BSA, Food Science

College, School, Division AFLS Department Code FDSC

Current Code (6 digit Alpha) FDSCBS Proposed Code (6 digit Alpha)
Prior approval from the Office of the Registrar is required.

[] Interdisciplinary Program CIP Code 01.1001
Prior assignment from Office of Institutional Research is required.

Proposed Name New Concentration: Food and Culinary Sciences (FDCU)
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

[X] For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE
http://www.adhe.edu/divisions/academicaffairs/Pages/aa_academicproposals.aspx

[] Program proposal uses courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____
No new students admitted to program after Term: ____ Year: _____
Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program or Program Policies

Insert here a statement of the exact changes to be made: _____

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change in Program Policies

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

Food and Culinary Sciences Concentration

The Culinary Sciences Concentration is an interdisciplinary program of food science and culinary arts. By combining knowledge of the science behind food with the creativity of culinary arts, students bring a unique set of skills to the food industry that will enable them to define the future of food through the creative process of developing new food products. Graduates with a combination of culinary and food science backgrounds are very attractive to the food industry. However, culinary arts programs across the country are very expensive. This concentration would offer a much cheaper alternative by providing food science and culinary arts training within the B.S.A. degree, thus allowing more students to achieve the interdisciplinary training. There is a definite interest in this type of interdisciplinary training demonstrated by several UA Food Science alumni who either entered the UA after graduating from culinary school or have attended culinary school following their B.S.A. degree and are now employed in the food industry in product development. Additionally, we have several current students who are interested in pursuing culinary arts training in addition to their food science degree.

SECTION VII: Catalog Text and Format

In the box below, insert the current catalog text which is to be changed, with changes highlighted with the color yellow. Include all proposed changes identified in Section V. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate. If you are proposing a new program, give proposed text with all of the elements listed below. If you are proposing modified text, include these elements as appropriate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.
- State eight-semester plan requirements

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

Food Science (FDSC)

Search this catalog

Go!

Jean-François Meullenet

~~Interim~~ Head of the Department

N-201 Food Science Building

479-575-4605

foodscience.uark.edu

- University Professors Hettiarachachy, Siebenmorgen
- Professors Buescher, Crandall, Howard, Meullenet, Proctor, Ricke, Wang
- Assistant Professors Devareddy, Lee, Morawicki
- Adjunct Faculty Members Ahn, Apple (N.), Brady, Foote, King, Li, Marcy, Morris (M.), Owens-Hanning, Pohlman, Prior

Food science is the application of science and technology to processing, packaging, safety, product invention and distribution of food products. Food science deals with all aspects of food between production and consumption and involves many disciplines, including chemistry, microbiology, nutrition, engineering and sensory science.

Food science prepares students for many interesting, rewarding and challenging professional career opportunities in industry, business, governmental and educational organizations associated with food and food-related products. Due to the diversity and abundance of opportunities available, students graduating with a B.S.A. in food science readily obtain employment or continue studies for graduate school. Additionally, requirements for several pre-professional programs can be fulfilled while meeting requirements for the food science degree.

Students may choose one of ~~two~~ three areas of concentration for their degree program: Food Science (FDSC), ~~or~~ Food Technology (FDTN) or Food and Culinary Sciences (FDCU). The FDSC concentration at the University of Arkansas is one of only 39 programs in the United States and the only one in Arkansas that is approved by the Institute of Food Technologists. It provides students with a strong background in basic and applied sciences and food chemistry, microbiology, analysis, quality and engineering.

The FDTN concentration provides students interested in food business and management careers with an integrated background in food science and business. With proper course selection, students in the food technology concentration can complete a minor in agribusiness or general business while completing their core requirements, thus leaving elective hours available for further educational enhancement.

[The FDCU concentration provides students interested in product development careers with an interdisciplinary background in food science and culinary arts. This concentration is a partnership program with Northwest Arkansas Community College \(NWACC\). Students complete their culinary arts courses on the NWACC campus for transfer credit to the UA. These courses can be taken prior to admission to the UA or taken while in residence at the UA. Students will also earn an associate's degree from NWACC. Food and Culinary Sciences concentration will provide students with the course work necessary to be eligible to become a Research Chef through the Research Chef's Association.](#)

Students in **both-all** concentrations are offered opportunities for research, internships, international experiences and selection of a minor.

Requirements for a Major in Food Science (FDSC)

State [minimum core](#) and discipline specific general education requirements:

(Course work that meets state minimum core requirements is in **bold**.)

Communications (6-12 hours)

__ Choose from **English Core** courses (6 hours)

__ COMM 1313 Fundamentals of Communication

FDSC Concentration:

__ ENGL 3053 Technical and Report Writing or
AGED 3142/3141L Agri Communications and lab

FDTN Concentration:

__ AGED 3142/3141L Agri Communications and lab

[FDCU Concentration:](#)

[AGED 3142/3141L Agri Communications and lab](#)

U.S. History and Government (3 hours)

__ Choose from **U.S. History Core** courses

Mathematics and Statistics (12-13 hours)

__ Choose **MATH Core** course

FDSC Concentration:

__ MATH 1213 Plane Trigonometry

__ MATH 2554 Calculus I

__ STAT 2303 Principles of Statistics or STAT 2023 Biostatistics or PSYC 2013 Intro to Statistics for Psychologists or AGST 4023 Principles of Experimentation

FDTN Concentration:

__ MATH 2043 Survey of Calculus

__ MATH 2053 Finite Mathematics

__ AGEC 2403 Quantitative Tools for Agribusiness or WCOB 1033 Data Analysis and Interpretation or
STAT 2303 Principles of Statistics or AGST 4023 Principles of Experimentation

[FDCU Concentration:](#)

[MATH 2043 Survey of Calculus](#)

[STAT 2303 Principles of Statistics or PSYC 2013 Introduction to Statistics for Psychologists](#)

Sciences (20-27 hours)

__ **BIOL 1543/1541L** Principles of Biology and lab

__ BIOL 2013/2011L General Microbiology and lab

__ **CHEM 1103/1101L** University Chemistry I and lab

__ **CHEM 1123/1121L** University Chemistry II and lab

FDSC Concentration:

__ CHEM 2613/2611L Organic Physiological Chemistry and lab or CHEM 3603/3601L Organic Chemistry I and lab

__ CHEM 3813 Introduction to Biochemistry

__ PHYS 2013/2011L College Physics I and lab

FDTN Concentration:

__ CHEM 2613/2611L Organic Physiological Chemistry and lab

[FDCU Concentration:](#)

[CHEM 2613/2611L Organic Physiological Chemistry and lab](#)

Fine Arts and Humanities (6 hours)

__ Choose **Fine Arts, Humanities Core** courses

Social Sciences (9 hours)

FDSC Concentration:

__ Choose from **Social Sciences Core** courses (9 hours)

FDTN Concentration:

__ Select **AGEC 1103** Agricultural Microeconomics or
ECON 2143 Basic Economics-Theory & Practice

__ Choose from **Social Science Core** courses (6 hours)

FDCU Concentration:

Choose from **Social Sciences Core** courses (9 hours)

FDSC Degree Requirements (21 hours)

__ AFLS 1011 Freshman Orientation

__ FDSC 1011 Food Science Orientation

__ FDSC 1103 Introduction to Food Science

__ FDSC 3103 Principles of Food Processing and lab

__ FDSC 4203 Quality Evaluation and Control and lab

__ FDSC 4304 Food Chemistry and lab

__ FDSC 4413 Sensory Evaluation and Process Development and lab

__ FDSC 4713 Food Product & Process Development and lab

General Electives (~~18~~15-24 hours)

Additional Requirements for Food Science Concentration (15 hours)

__ HESC 1213 Nutrition in Health

__ FDSC 4114 Food Analysis with lab component

__ FDSC 4124 Food Microbiology with lab component

__ FDSC 4754 Engineering Principles of Food Processing with lab component

Additional Requirements for Food Technology Concentration (23 hours)

__ FDSC 2503 Food Safety and Sanitation

__ FDSC 3202 Introduction to Food Law

__ FDSC 431V (3 hours) Internship in Food Science

__ WCOB 1120 Computer Competency Requirement (AGME 2903 may be taken instead, but hours will be counted toward elective hours)

__ AGECE 2142/2141L Agribusiness Financial Records and lab or
WCOB 1023 Business Foundations

__ AGECE 4313 Agricultural Business Management or

WCOB 3563 Management Concepts & Organizational Behavior

__ AGECE 3303 Food and Agricultural Marketing or

MKTG 3433 Introduction to Marketing Strategy

Choose 6 hours of business coursework from the departmental codes: ACCT, AGECE, ECON, FINN, ISYS, MGMT, MKTG, TLOG or WCOB

Additional Requirements for Food and Culinary Sciences Concentration (29 hours)

* indicates NWACC course codes:

HESC 1213 Nutrition in Health

BAKG 1003 Introduction to Baking

FDSC 2503 Food Safety & Sanitation OR CULY 1003* Safety and Sanitation

HESC 2112 & 2111L Foods I and Lab OR CULY 1103* Introduction to Food Preparation

CULY 1203* Stocks, Sauces and Soups

CULY 1303* Center of the Plate Applications

CULY 1403* Garde Manger

CULY 2003* World Cuisine

FDSC 3202 Introduction to Food Law

[FDSC 431V \(3 hr\) Internship in Food Science](#)

124 Total Hours

Food Science B.S.A., Food Science Concentration Degree Program

Students wishing to follow the degree plan should see the [Eight-Semester Degree Completion Policy](#) in the Academic Regulations section for university requirements of the program.

Fall Semester Year 1

4 Science University Core BIOL 1543/1541L Principles of Biology and lab

3 University Core MATH 1203 College Algebra

3 University Core ENGL 1013 Composition I unless exempt

1 AFLS 1011 Freshman Orientation

1 FDSC 1011 Food Science Orientation

3 University Core in Fine Arts/Humanities or Social Science or History

15 Semester hours

Spring Semester Year 1

3 FDSC 1103 Introduction to Food Science

3 CHEM 1103 University Chemistry I

3 University Core ENGL 1023 Composition II unless exempt

3 University Core in Fine Arts/Humanities or Social Science or History

3 MATH 1213 Plane Trigonometry

15 Semester hours

Fall Semester Year 2

4 Science University Core CHEM 1123/1121L University Chemistry II and lab

1 CHEM 1101L University Chemistry I lab (Credit earned when CHEM 1121L is completed with grade of "C" or better)

4 MATH 2554 Calculus I

3 COMM 1313 Fundamentals of Communication

3 University Core in Fine Arts/Humanities or Social Science or History

15 Semester hours

Spring Semester Year 2

4 CHEM 2613/2611L Organic Physiological Chemistry and lab

3 University Core in Fine Arts/Humanities or Social Science or History

3 Statistics Elective

4 BIOL 2013/2011L General Microbiology and lab

3 HESC 1213 Nutrition in Health

17 Semester hours

Fall Semester Year 3

6-7 FDSC 3103 Principles of Food Processing with lab component and FDSC 4203 Quality Evaluation Control with lab component (even years) or FDSC 4413 Sensory Evaluation of Food with lab component and FDSC 4304 Food Chemistry with lab component (odd years)

3 University Core in Fine Arts/Humanities or Social Science or History

3 General Elective

4 PHYS 2013/2011L College Physics I and lab

16-17 Semester hours

Spring Semester Year 3

0-3 FDSC 4713 Food Product and Process Development with lab component (odd years)

6 General Elective

0-4 FDSC 4124 Food Microbiology with lab component (even years)

4 FDSC 4754 Engineering Principles of Food Processing with lab component (odd years) or FDSC 4114 Food Analysis with lab component (even years)

3 AGED 3142/3141L Agri Communications and lab or ENGL 3053 Technical and Report Writing

14-17 Semester hours

Fall Semester Year 4

6-7 FDSC 3103 Principles of Food Processing with lab component and FDSC 4203 Quality Evaluation and Control with lab component (even years) or FDSC 4413 Sensory Evaluation of Food with lab component and FDSC 4304 Food Chemistry with lab component (odd years)

3 General Elective

3 CHEM 3813 Introduction to Biochemistry

3 General Elective

15-16 Semester hours

Spring Semester Year 4

0-3 FDSC 4713 Food Product and Process Development with lab component (odd years)

3 University Core in Fine Arts/Humanities or Social Science or History

3 General Elective

0-4 FDSC 4124 Food Microbiology with lab component (even years)

4 FDSC 4114 Food Analysis with lab component (even years) or FDSC 4754 Engineering Principles of Food Processing with lab component (odd years)

13-14 Semester hours

124 Total hours

*Even year/odd year requirements

Food Science B.S.A., Food Technology Concentration Degree Program

The Food Science B.S.A. program with Food Technology Concentration requires a summer internship after the third year and so is not eligible for the Eight-Semester Degree Completion Program. The program can still be finished in four years by following the nine-semester plan shown below.

Fall Semester Year 1

4 Science University Core BIOL 1543/1541L Principles of Biology and lab

3 University Core MATH 1203 College Algebra

3 University Core ENGL 1013 Composition I

1 AFLS 1011 Freshman Orientation

1 FDSC 1011 Food Science Orientation

3 University Core in Fine Arts/Humanities or Social Science or History

15 Semester hours

Spring Semester Year 1

3 FDSC 1103 Introduction to Food Science
3 CHEM 1103 University Chemistry I
3 University Core ENGL 1023 Composition II
3 AGECE 1103 Ag Microeconomics or ECON 2143 Basic Economics-Theory & Practice
3 COMM 1313 Fundamentals of Communication
0 WCOB 1120 Computer Competency Requirement

15 Semester hours

Fall Semester Year 2

4 Science University Core CHEM 1123/1121L University Chemistry II and lab

1 CHEM 1101L University Chemistry I lab (Credit earned when CHEM 1121L is completed with grade of "C" or better)

3 MATH 2053 Finite Mathematics

3 FDSC 2503 Food Safety and Sanitation

3 AGECE 2142/2141L Agribusiness Financial Records and lab or WCOB 1023 Business Foundations

14 Semester hours

Spring Semester Year 2

4 CHEM 2613/2611L Organic Physiological Chemistry and lab

3 University Core in Fine Arts/Humanities or Social Science or History

3 Statistics Elective

3 MATH 2043 Survey of Calculus

3 General Elective

16 Semester hours

Fall Semester Year 3

6-7 FDSC 3103 Principles of Food Processing with lab component and FDSC 4203 Quality Evaluation Control with lab component (even years) or FDSC 4413 Sensory Evaluation of Food with lab component and FDSC 4304 Food Chemistry with lab component (odd years)

3 University Core in Fine Arts/Humanities or Social Science or History

3 General Elective

4 BIOL 2013/2011L General Microbiology and lab

16-17 Semester hours

Spring Semester Year 3

0-3 FDSC 4713 Food Product and Process Development with lab component (odd years)

3 General Elective

0-2 FDSC 3202 Introduction to Food Law (even years)

3 Business Elective

3 University Core in Fine Arts/Humanities or Social Science or History (odd years)

11-12 Semester hours

Summer Semester Year 3

3 FDSC 431V Internship in Food Science

3 Semester hours

Fall Semester Year 4

6-7 FDSC 3103 Principles of Food Processing with lab component and FDSC 4203 Quality Evaluation and Control with lab component (even years) or FDSC 4413 Sensory Evaluation of Food with lab component and FDSC 4304 Food Chemistry with lab component (odd years)

3 General Elective

3 AGEC 4313 Agricultural Business Management or WCOB 2033 Acquiring and Managing Human Capital

3 AGEC 3303 Food and Agricultural Marketing or MKTG 3563 Management Concepts and Organizational Behavior

15-16 Semester hours

Spring Semester Year 4

0-3 FDSC 4713 Food Product and Process Development with lab component (odd years)

3 University Core in Fine Arts/Humanities or Social Science or History

3 General Elective

3 AGED 3142/3141L Agri Communications and lab

0-2 FDSC 3202 Introduction to Food Law (even years)

3 Business Electives

14-15 Semester hours

124 Total hours

Food Science B.S.A., Food and Culinary Sciences Concentration Degree Program

The Food Science B.S.A. program with Food and Culinary Sciences Concentration requires a summer internship after the third year and so is not eligible for the Eight-Semester Degree Completion Program. The program can still be finished in four years by following the nine-semester plan shown below. This program is a partnership with Northwest Arkansas Community College (NWACC) and requires some courses to be taken on the NWACC campus for transfer credit.

Fall Semester Year 1

4 Science University Core BIOL 1543/1541L Principles of Biology and lab

3 University Core MATH 1203 College Algebra

3 University Core ENGL 1013 Composition I

1 AFLS 1011 Freshman Orientation

1 FDSC 1011 Food Science Orientation

3 CULY 1003 Safety and Sanitation (taken at NWACC)

15 Semester hours

Spring Semester Year 1

3 FDSC 1103 Introduction to Food Science

3 CHEM 1103 University Chemistry I

3 University Core ENGL 1023 Composition II

3 MATH 2043 Survey of Calculus

3 CULY 1103 Introduction to Food Preparation Theory (taken at NWACC)

15 Semester hours

Fall Semester Year 2

4 Science University Core CHEM 1123/1121L University Chemistry II and lab

1 CHEM 1101L University Chemistry I lab (Credit earned when CHEM 1121L is completed with grade of "C" or better)

3 COMM 1313 Fundamentals of Communication

3 University Core in Fine Arts/Humanities or Social Science or History

2 General Elective (must be upper division)

3 CULY 1203 Stocks, Soups and Sauces (taken at NWACC)

16 Semester hours

Spring Semester Year 2

4 CHEM 2613/2611L Organic Physiological Chemistry and lab

3 STAT 2303 Principles of Statistics or PSYC 2013 Introduction to Statistics for Psychologists

3 HESC 1213 Nutrition in Health

3 University Core in Fine Arts/Humanities or Social Science or History

3 CULY 1303 Center of the Plate Application (taken at NWACC)

16 Semester hours

Fall Semester Year 3

[6-7 FDSC 3103 Principles of Food Processing with lab component and FDSC 4203 Quality Evaluation and Control with lab component \(even years\) or FDSC 4413 Sensory Evaluation of Food with lab component and FDSC 4304 Food Chemistry with lab component \(odd years\)](#)

[4 BIOL 2013/2011L General Microbiology and lab](#)

[3 University Core in Fine Arts/Humanities or Social Science or History](#)

[3 CULY 2003 World Cuisine \(taken at NWACC\)](#)

16-17 Semester hours

Spring Semester Year 3

[2-3 FDSC 4713 Food Product and Process Development with lab component \(odd years\) or FDSC 3202 Introduction to Food Law \(even years\)](#)

[3 University Core in Fine Arts/Humanities or Social Science or History](#)

[6-7 General Elective](#)

[3 CULY 1403 Garde Manger \(taken at NWACC\)](#)

15 Semester hours

Summer Semester Year 3

[3 FDSC 431V Internship in Food Science](#)

3 Semester hours

Fall Semester Year 4

[6-7 FDSC 3103 Principles of Food Processing with lab component and FDSC 4203 Quality Evaluation and Control with lab component \(even years\) or FDSC 4413 Sensory Evaluation of Food with lab component and FDSC 4304 Food Chemistry with lab component \(odd years\)](#)

[3 General Elective](#)

[3 University Core in Fine Arts/Humanities or Social Science or History](#)

[3 BAKG 1003 Introduction to Baking \(taken at NWACC\)](#)

15-16 Semester hours

Spring Semester Year 4

[2-3 FDSC 4713 Food Product and Process Development with lab component \(odd years\) or FDSC 3202 Introduction to Food Law \(even years\)](#)

[3 AGED 3142/3141L Agri Communications and lab](#)

[4-3 General Elective](#)

[3 University Core in Fine Arts/Humanities or Social Science or History](#)

12 Semester hours

124 Total hours

Minor in Food Science (FDSC-M)

The Food Science Minor will consist of 18 hours to include the following:

___ FDSC 3103 Principles of Food Processing with lab component

___ FDSC 4124 Food Microbiology with lab component

___ FDSC 4304 Food Chemistry with lab component

Choose 7 hours from:

___ FDSC 2503 Food Safety and Sanitation

- ___ FDSC 3202 Introduction to Food law
- ___ FDSC 4114 Food Analysis with lab component
- ___ FDSC 4203 Quality Evaluation and Control with lab component
- ___ HESC 1213 Nutrition in Health

A student planning to minor in food science must consult a Department of Food Science adviser.

**Check Sheet for Food and Culinary Sciences Concentration (Partnership with NWACC) - edited
2010-2011**

STUDENT _____

STUDENT'S ID _____

ADVISOR _____

COMMUNICATIONS (6-12 hours)

- ENGL 1013 Composition I unless exempt (FA, SP, SU)
- ENGL 1023 Composition II unless exempt (FA, SP, SU)
- COMM 1313 Fundamentals of Communication (FA, SP, SU)
- AGED 3142 & AGED 3141L Agri Communications (FA, SP)

US HISTORY AND GOVERNMENT (3 hours)

(choose one from the following courses)

- HIST 2003 History of American People to 1877 (FA, SP, SU)
- HIST 2013 History of American People to Present (FA, SP, SU)
- PLSC 2003 American National Government (FA, SP, SU)

MATHEMATICS AND STATISTICS (9 hours)

- MATH 1203 College Algebra (FA, SP, SU)
- MATH 2043 Survey of Calculus (FA, SP, SU)

(choose one from the following courses)

- STAT 2303 Principles of Statistics (SP)
- PSYC 2013 Intro. to Statistics for Psychologists (FA, SP)

PHYSICAL AND BIOLOGICAL SCIENCES (20 hours)

- BIOL 1543 & BIOL 1541L Principles of Biology (FA, SP, SU)
- BIOL 2013 & BIOL 2011L General Microbiology (FA, SP, SU)
- CHEM 1103 & CHEM 1101L University Chemistry I (FA, SU)
- CHEM 1123 & CHEM 1121L University Chemistry II (FA, SP, SU)
- CHEM 2613 & CHEM 2611L Organic Physiol. Chemistry (SP, SU)

FINE ARTS AND HUMANITIES (6 hours)

Category A: Fine Arts (choose one from the following courses)

- ARCH 1003 Architecture Lecture (FA, SP)
- ARHS 1003 Art Lecture (FA, SP, SU)
- COMM 1003 Film Lecture (FA, SP, SU)
- DANC 1003 Movement & Dance (FA, SP, SU)
- DRAM 1003 Theatre Lecture (FA, SP, SU)
- LARC 1003 American Landscape (FA, SP)
- MLIT 1003 Music Lecture (FA, SP, SU)

Category B: Humanities (choose one from the following courses)

- ARCH 1013 Diversity and Design (FA)
- CLST 1003 Intro to Classical Studies: Greece (FA, odd)
- CLST 1013 Intro to Classical Studies: Rome (SP, even)
- HUMN 1124H Honors Equilibrium of Cultures, 500-1600 (SP)
- HUMN 2124H Honors 20th Century Global Culture (SP)
- HUMN 2003 Intro to Gender Studies (SP)
- PHIL 2003 Intro to Philosophy (FA, SP, SU)
- PHIL 2103 Intro to Ethics (FA, SP, SU)
- PHIL 2203 Logic (FA, SP, SU)
- PHIL 3103 Ethics and the Professions (FA, SP, SU)
- WLIT 1113 World Lit I (FA, SP, SU)
- WLIT 1123 World Lit II (FA, SP, SU)
- Any Intermediate I Foreign Language (FA, SP, SU)

SOCIAL SCIENCES (9 hours)

(choose three from the following courses)

- ___ AGEC 1103 Ag Microecon (FA, SP) ___ AGEC 2103 Ag Macroecon (FA, SP)
- ___ ANTH 1023 Anthropology (FA, SP, SU) ___ ECON 2013 Macroeconomics (FA, SP, SU)
- ___ ECON 2023 Microeconomics (FA, SP, SU) ___ ECON 2143 Basic Economics (FA, SP, SU)
- ___ GEOG 1123 Human Geog (FA, SP, SU) ___ GEOG 2003 World Reg. Geog (FA, SP)
- ___ HESC 1403 Life Span Devel (FA, SP) ___ HESC 2413 Family Relations (FA, SP)
- ___ HIST 1113 World Civ I (FA, SP, SU) ___ HIST 1123 World Civ II (FA, SP, SU)
- ___ HIST 2003 Am. History (FA, SP, SU) ___ HIST 2013 Am. History (FA, SP, SU)
- ___ HUMN 1114H Honors Roots of Culture to 500 C.E. (FA)
- ___ HUMN 2114H Honors Birth of Modern Culture (FA)
- ___ PLSC 2003 Am. Government (FA, SP, SU) ___ PLSC 2013 Comp. Politics (FA, SP, SU)
- ___ PLSC 2203 State & Local Govt. (FA, SP) ___ PSYC 2003 Psychology (FA, SP, SU)
- ___ RECR 2853 Leisure and Soc. (FA, SP, SU) ___ RSOC 2603 Rural Sociology (SP)
- ___ SOCI 2013 Sociology (FA, SP, SU) ___ SOCI 2033 Social Problems (FA, SP, SU)

FOOD SCIENCE CORE (21 hours)

- ___ AFLS 1011 Freshman Orientation (FA)
- ___ FDSC 1011 Food Science Orientation (FA)
- ___ FDSC 1103 Introduction to Food Science (SP)
- ___ FDSC 3103 Principles of Food Processing with lab (FA, even)
- ___ FDSC 4203 Quality Evaluation & Control with lab (FA, even)
- ___ FDSC 4304 Food Chemistry with lab (FA)
- ___ FDSC 4413 Sensory Evaluation of Food with lab (FA, odd)
- ___ FDSC 4713 Food Product & Process Development with lab (SP, odd)

ADDITIONAL REQUIREMENTS FOR CULINARY SCIENCES CONCENTRATION (29 hours)

- ___ HESC 1213 Nutrition in Health (FA, SP)
- ___ BAKG 1003* Introduction to Baking (SP, FA)
- ___ FDSC 2503 Food Safety & Sanitation (FA) OR
- CULY 1003* Safety and Sanitation (SP, FA)
- ___ HESC 2112 & 2111L Foods I (SP, FA) OR
- CULY 1103* Introduction to Food Preparation (SP, FA)
- ___ CULY 1203* Stocks, Sauces and Soups (SP, FA)
- ___ CULY 1303* Center of the Plate Applications (SP, FA)
- ___ CULY 1403* Garde Manger (SP)
- ___ CULY 2003* World Cuisine (FA)
- ___ FDSC 3202 Introduction to Food Law (SP, even)
- ___ FDSC 431V Internship in Food Science (3 hr)

*NWACC course codes

ELECTIVES (15-21 hours)

Note: 15 hours must be upper division

OTHER GRADUATION REQUIREMENTS

- 124 total semester hours including:
 - 9 hours outside departmental code (FDSC) and within Bumpers College
 - 39 semester hours of 3000/4000 level courses
 - 30 semester hours in Bumpers College at UA
- Maximum of 68 hours lower division transfer courses
- No more than 25% (31) hours of D grades

Dale Bumpers College of Agricultural, Food & Life Sciences
NINE-SEMESTER DEGREE COMPLETION PROGRAM
B.S.A. – Food Science (FDSC) – Culinary Sciences (FDCU)
2011-2012

FDSC Requirements: 6-12 hours Communication; 3 hours History; 9 hours Mathematics and Statistics; 20 hours Science; 6 hours Fine Arts/Humanities; 9 hours Social Sciences; 53 hours departmental core; 12-18 hours electives

Bold – Course meets University Core. Pre-requisites, co-requisites, or recommended courses are in parentheses. *Italicized* courses taken at NWACC.

Fall Semester Year 1	
Course	Hours
BIOL 1543/1541L Principles of Biology and lab	4
MATH 1203 College Algebra	3
ENGL 1013 Composition I unless exempt	3
AFLS 1011 Freshman Orientation	1
FDSC 1011 Food Science Orientation	1
<i>CULY 1003 Safety and Sanitation</i>	3
Total Semester Hours	15

Spring Semester Year 1	
Course	Hours
CHEM 1103 University Chemistry I and lab (Pre-MATH 1203)	3
MATH 2043 Survey of Calculus (Pre-MATH 1203)	3
ENGL 1023 Comp II (Pre-ENGL 1013) unless exempt	3
FDSC 1103 Introduction to Food Science	3
<i>CULY 1103 Introduction to Food Preparation Theory (Pre-CULY 1003)</i>	3
Total Semester Hours	15

Fall Semester Year 2	
Course	Hours
CHEM 1123/1121L Univ. Chemistry II and lab (Pre-CHEM 1103)	4
CHEM 1101L University Chemistry I Lab (Credit earned for CHEM 1101L when CHEM 1121L completed with a grade of "C" or better)	1
COMM 1313 Fundamentals of Communication	3
Fine Arts/Humanities OR Social Science OR History Core Elective	3
General Elective (must be upper division)	2
<i>CULY 1203 Stocks, Soups and Sauces (Pre-CULY 1003 and CULY 1103)</i>	3
Total Semester Hours	16

Spring Semester Year 2	
Course	Hours
CHEM 2613/2611L Organic Physiological Chemistry and lab (Pre-CHEM 1123/1121L)	4
Statistics Elective – choose from STAT 2303 or PSYC 2013	3
HESC 1213 Nutrition in Health	3
Fine Arts/Humanities OR Social Science OR History Core Elective	3
<i>CULY 1303 Center of the Plate Application (Pre-CULY 1003, CULY 1103 and CULY 1203)</i>	3
Total Semester Hours	16

Fall Semester Year 3	
Course	Hours
FDSC 3103 Principles of Food Processing with lab (Pre-CHEM 1123/1121L and MATH 2043 or MATH 2554) { even years }	3
OR FDSC 4413 Sensory Evaluation of Food with lab (Pre-Statistics) { odd years }	
FDSC 4203 Quality Evaluation & Control with lab (Pre-CHEM 1123/1121L) { even years } OR FDSC 4304 Food Chemistry with lab (Pre-CHEM 2613/2611L) { odd years }	3-4
BIOL 2013/2011L General Microbiology and lab (Pre-BIOL 1543/1541L and 1 semester of chemistry)	4
Fine Arts/Humanities OR Social Science OR History Core Elective	3
<i>CULY 2003 World Cuisine (Pre-CULY 1003, CULY 1103 and CULY 1203)</i>	3
Total Semester Hours	16-17

Spring Semester Year 3	
Course	Hours
FDSC 4713 Food Product & Process Development with lab (Pre-CHEM 1123/1121L and BIOL 2013/2011L, Junior standing, FDSC major or consent){ odd years } OR FDSC 3202 Introduction to Food Law { even years }	2-3
<i>CULY 1403 Garde Manger (Pre-CULY 1003, CULY 1103 and CULY 1203)</i>	3
Fine Arts/Humanities OR Social Science OR History Core Elective	3
General Elective (must be upper division)	7-6
Total Semester Hours	15

Summer Year 3	
Course	Hours
FDSC 431V Internship in Food Science (Pre-junior standing)	3

Fall Semester Year 4	
Course	Hours
FDSC 4413 Sensory Eval. of Food with lab (Pre-Statistics) { odd years } OR FDSC 3103 Principles of Food Processing with lab (Pre-CHEM 1123/1121L and MATH 2043 or MATH 2554) { even years }	3
FDSC 4304 Food Chemistry with lab (Pre-CHEM 2613/2611L) { odd years } OR FDSC 4203 Quality Evaluation & Control with lab (Pre-CHEM 1123/1121L) { even years }	3-4
<i>BAKG 1003 Introduction to Baking (Pre-CULY 1003)</i>	3
General Elective (must be upper division)	3
Fine Arts/Humanities OR Social Science OR History Core Elective	3
Total Semester Hours	15-16

Spring Semester Year 4	
Course	Hours
FDSC 3202 Introduction to Food Law { even years } OR FDSC 4713 Food Product & Process Development with lab (Pre-CHEM 1123/1121L and BIOL 2013/2011L, Junior standing, FDSC major or consent) { odd years }	2-3
AGED 3142/3141L Agri Communications and lab	3
General Electives (must be upper division)	4-3
Fine Arts/Humanities OR Social Science OR History Core Elective	3
Total Semester Hours	12
TOTAL HOURS	124

PROPOSED FOOD AND CULINARY SCIENCES CONCENTRATION

DEPARTMENT OF FOOD SCIENCE DALE BUMPERS, COLLEGE OF AGRICULTURAL, FOOD AND LIFE SCIENCES

1. Explain the need for this change and provide estimates of the impact on student numbers, faculty time and facilities.

Need:

The Culinary Sciences Concentration is an interdisciplinary program of food science and culinary arts. By combining knowledge of the science behind food with the creativity of culinary arts, students bring a unique set of skills to the food industry that will enable them to define the future of food through the creative process of developing new food products. Graduates with a combination of culinary and food science backgrounds are very attractive to the food industry. However, culinary arts programs across the country are very expensive. This concentration would offer a much cheaper alternative by providing food science and culinary arts training within the B.S.A. degree, thus allowing more students to achieve the interdisciplinary training.

Student Numbers:

There is a definite interest in this type of interdisciplinary training demonstrated by several UA Food Science alumni who either entered the UA after graduating from culinary school or have attended culinary school following their B.S.A. degree and are now employed in the food industry in product development. Additionally, we have several current students who are interested in pursuing culinary arts training in addition to their food science degree.

Faculty Time and Facilities:

No new courses are needed for the Food and Culinary Sciences concentration. Teaching facilities are/will be adequate for the concentration and anticipated enrollment.

2. How does this change impact or duplicate other courses or degree programs in the CAFLS?

The proposed concentration does not duplicate other degree programs in the CAFLS.

3. How does this change impact or duplicate other courses or degree programs in other colleges?

The proposed concentration does not duplicate any degree programs in other colleges.

4. How does this change impact agreements with ACTA partners?

It should not impact any agreements with ACTA partners.

5. Will this necessitate a change in the catalog?

Proposed text for changes in the catalog is indicated in Section VII.

6. Will this change necessitate changes in recruiting material (if yes, provide proposed text for changes)?

Recruiting materials will be changed to include a description of the Food and Culinary Sciences concentration. The changes will primarily reflect the curriculum with an example of a four year semester plan. The recruiting materials will be submitted to the CAFLS administration for review and approval prior to printing and distribution.

7. Will this change necessitate changes to departmental or college websites?

Information in our website will be updated to include the new curriculum following its approval.

8. Does the department currently have the necessary resources (personnel and physical) to make this change (if not, provide a summary of needed resources)?

The department currently has the resources required for this new concentration.

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

- (1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
- (7) Treasurer (8) Undergraduate Program Committee

5/12/08