

FOOD SCIENCE & INDUSTRY

Technology Option

KANSAS STATE UNIVERSITY

College of Agriculture



Fall 2018

Spring 2019

NAME _____

ID # _____

****126 Total Hours for Graduation — 45 hours must be at the 300 level or above****

COMMUNICATIONS (10-12 hrs)

| | | | | |
|--------------------|------|-----|-----------------------|---|
| 1,2,3 | ENGL | 100 | Expository Writing I | 3 |
| 1,2,3 | ENGL | 200 | Expository Writing II | 3 |
| Select one: | | | | |
| 1,2,3 | COMM | 105 | Public Speaking IA | 2 |
| 1,2,3 | COMM | 106 | Public Speaking I | 3 |

One additional course in communications (2-3 hrs)

SOCIAL SCIENCES & HUMANITIES (12 hrs)

| | | | | |
|-------|------|-----|----------------------|---|
| 1,2,3 | ECON | 110 | Prin Macro Economics | 3 |
|-------|------|-----|----------------------|---|

QUANTITATIVE STUDIES (9-10 hrs)

Select one:

| | | | | |
|-------|------|-----|-------------------------|---|
| 1,2,3 | MATH | 205 | Gen Calc Linear Algebra | 3 |
| 1,2,3 | MATH | 220 | Anal Geometry & Calc I | 4 |

Select one:

| | | | | |
|-------|------|-----|------------------------|---|
| 1,2,3 | STAT | 325 | Intro to Statistics | 3 |
| 1,2, | STAT | 340 | Biometrics | 3 |
| 1,2,3 | STAT | 350 | Business & Econ Stat I | 3 |

Select one:

| | | | | |
|-------|------|-----|-------------------------|---|
| 2 | STAT | 341 | Biometrics II | 3 |
| 1,2,3 | STAT | 351 | Business & Econ Stat II | 3 |

BIOLOGICAL SCIENCES (8 hrs)

| | | | | |
|-------|------|-----|-----------------------|---|
| 1,2,3 | BIOL | 198 | Principles of Biology | 4 |
| 1,2 | BIOL | 455 | General Microbiology | 4 |

PHYSICAL SCIENCES (20-21 hrs)

| | | | | |
|-------|-------|-----|----------------------|---|
| 1,2,3 | CHM | 210 | Chemistry I | 4 |
| 1,2,3 | CHM | 230 | Chemistry II | 4 |
| 1,2,3 | CHM | 350 | Gen Organic Chem | 3 |
| 1,2,3 | CHM | 351 | Gen Organic Chem Lab | 2 |
| 1,2,3 | BIOCH | 521 | Gen Biochemistry | 3 |

Select one:

| | | | | |
|-------|------|-----|---------------------|---|
| 1,2,3 | PHYS | 113 | General Physics I | 4 |
| 2 | PHYS | 115 | Descriptive Physics | 5 |

CORE FOOD SCIENCE COURSES (30-31 hrs)

(Must have 2.0 GPA average in core food science courses)

| | | | | |
|-----|-------|-----|--------------------------------|---|
| 1,2 | FDSCI | 302 | Intro Food Science | 3 |
| 2 | FDSCI | 305 | Fund of Food Processing | 3 |
| 1 | FDSCI | 500 | Food Science Seminar (Sr only) | 1 |
| 2 | FDSCI | 501 | Food Chemistry | 3 |
| 1 | FDSCI | 600 | Food Microbiology | 2 |
| 1 | FDSCI | 690 | Principles of HACCP and HARPC | 3 |

Select one:

| | | | | |
|-----|-------|-----|-------------------------------|---|
| 1,2 | FDSCI | 307 | Applied Microbiology for Meat | 3 |
| 1 | FDSCI | 601 | Food Microbiology Lab | 2 |

Select one:

| | | | | |
|-------|------|-----|---------------------------|---|
| 1,2,3 | FNDH | 132 | Basic Nutrition | 3 |
| 1,2 | ASI | 318 | Fundamentals of Nutrition | 3 |

Select 10 credit hours:

| | | | | |
|---|-------|-----|----------------------------------|---|
| 1 | FDSCI | 695 | Quality Assurance Food Prod | 3 |
| 1 | FDSCI | 740 | R&D Food Product Development | 4 |
| 2 | GRSC | 540 | Process Calc in Food Systems | 3 |
| 2 | GRSC | 541 | Process Calc in Food Systems Lab | 1 |

-AND-

Either:

| | | | | |
|-------|-------|-----|--------------------------------|---|
| 1 | FDSCI | 725 | Food Analysis | 3 |
| -OR- | | | | |
| 1 | FDSCI | 727 | Chemical Methods Food Analysis | 2 |
| -AND- | | | | |
| 1 | FDSCI | 728 | Physical Methods Food Analysis | 2 |

PROCESSING ELECTIVES (8 hrs)^a

(Must have 8 hrs. processing electives from at least 2 commodity areas - Dairy, Grain, Meat, or Fruit/Vegetables):

PROFESSIONAL ELECTIVES (18 hrs)^a

K-STATE 8 REQUIREMENTS

Each student must successfully complete courses to cover all of the K-State 8 areas.



a = See Professional Electives Course List
 1 = Fall 2 = Spring 3 = Summer

SOCIAL SCIENCES & HUMANITIES (12 hrs)

ECON 110 Principles of Macroeconomics

Select 9 credit hours (Suggested courses must be taken from more than one department.):

- Anthropology - Any course
- Architecture – ARCH 301 Appreciation of Architecture
- Art - Any course
- Communications - Any course
- Dance - Any course
- Economics - Any course between ECON 120 and ECON 735
- English - Any course **excluding ENGL 100** Expos Writing I and **ENGL 200** Expos Writing II
- Family Studies and Human Services - Any course
- Geography - Any course **excluding GEOG 221**
- History - Any course
- Music - Any course
- Philosophy - Any course
- Political Science - Any course
- Psychology - Any course
- Social Work - Any course
- Sociology - Any course
- Theatre - Any course
- Women Studies – WOMST 105 Intro to Women’s Studies

PROFESSIONAL ELECTIVES

| <u>PROCESSING ELECTIVES</u> | | | | <u>SPECIALIZATION ELECTIVES</u> | | | | |
|---------------------------------|-------|-----|---|---------------------------------|-------|-----------|---|-----|
| 1 | ASI | 310 | Poultry Products Evaluation | 2 | 1,2,3 | ACCTG 231 | Accounting Business Operations | 3 |
| 1,2 | ASI | 350 | Meat Science | 3 | 1,2,3 | ACCTG 241 | Accounting Investing & Financing | 3 |
| 1,2 | ASI | 361 | Meat Animal Processing | 2 | 1,2 | AGEC 120 | Ag Econ & Agribusiness | 3 |
| 1 | ASI | 370 | Principles of Meat Evaluation | 2 | | - OR - | | |
| 1 | ASI | 405 | Fundamentals of Milk Processing | 3 | 1,2,3 | ECON 120 | Prin Micro Economics | 3 |
| 1 | ASI | 495 | Advanced Meat Evaluation | 2 | 1,2 | AGEC | Any course 200 level or above | |
| 2 | ASI | 608 | Dairy Food Processing & Technology | 3 | 1 | AGRON 335 | Environmental Quality | 3 |
| 2 | ASI | 610 | Processed Meat Operations | 2 | 1,2 | ASI | Any course 200 level or above | |
| 2EY | ASI | 640 | Poultry Products Technology | 3 | 1 | ATM 160 | Eng. Systems and Technology Ag | 3 |
| 1 | ASI | 671 | Meat Selection and Utilization | 2 | 2 | ATM 450 | Sensors/Control Ag Biol Systems | 3 |
| 2 | ASI | 777 | Meat Technology | 3 | 1,2 | BIOL | Any course 300 level or above | |
| 1,2,3 | FDSCI | 660 | International Study Experience Food Sci | 3 | 1,2,3 | CHM | Any course 300 level or above | |
| 1,2 | GRSC | 101 | Intro to Grain Science and Industry | 3 | 1,2,3 | CIS | Any course between CIS 101 and CIS 105 | 1 |
| 1,2 | GRSC | 150 | Principles of Milling | 2 | 1,2,3 | ECON 510 | Intermediate Macro Economics | 3 |
| 1,2 | GRSC | 151 | Principles of Milling Lab | 1 | 1,2,3 | ECON 520 | Intermediate Micro Economics | 3 |
| 1 | GRSC | 405 | Grain Analysis Techniques | 2 | 1,2 | FDSCI | Any course 400 level or above | |
| 1,2 | GRSC | 602 | Cereal Science | 3 | 1,2,3 | FINAN 450 | Principles of Finance | 3 |
| 1 | GRSC | 625 | Flour and Dough Testing | 3 | 2 | GENAG 210 | Human & Cultural Diversity in Ag Sciences | 3 |
| 1 | GRSC | 635 | Baking Science I | 2 | 1,2,3 | GENAG 505 | Comparative Agriculture | 1-4 |
| 1 | GRSC | 636 | Baking Science I Lab | 2 | 1 | GENAG 711 | Occupational and Agricultural Health | 3 |
| 2 | GRSC | 637 | Baking Science II | 3 | 2 | GENAG 721 | Occupational and Ag Safety and Health | 3 |
| 2 | GRSC | 638 | Baking Science II Lab | 1 | 1,2 | GNHE 310 | Human Needs | 3 |
| 1 | GRSC | 645 | Pet Food Processing | 4 | 1,2 | GRSC | Any course | |
| 1EY | HORT | 325 | Introduction to Organic Farming | 2 | 2 | HM 220 | Environmental Issues in Hospitality | 3 |
| | | | | | 1,2 | HM 341 | Principles of Food Production Mngmt | 3 |
| | | | | | 1,2 | HM 442 | Introduction to Wines | 1 |
| | | | | | 1,2 | FNDH | Any course 300 level or above | |
| | | | | | 2 | HORT 780 | Health Promoting Phytochemicals | 2 |
| | | | | | 1,2 | KIN 360 | Anatomy and Physiology | 8 |
| | | | | | 1,2 | LEAD 212 | Intro to Leadership Concepts | 2-3 |
| | | | | | 1,2,3 | MANGT | Any course 300 level or above | |
| | | | | | 1,2,3 | MKTG | Any course 400 level or above | |
| | | | | | 1,2,3 | PHYS 114 | General Physics II | 4 |
| <u>COMMUNICATIONS ELECTIVES</u> | | | | | | | | |
| 1,2 | AGCOM | 400 | Ag Business Communications | 3 | | | | |
| 1 | AGCOM | 590 | New Media Technology | 3 | | | | |
| 2 | AGCOM | 610 | Crisis Communication | 3 | | | | |
| 1,2 | COMM | 311 | Bus and Professional Speaking | 3 | | | | |
| 1,2 | COMM | 321 | Public Speaking II | 3 | | | | |
| 1,2,3 | COMM | 322 | Interpersonal Communication | 3 | | | | |
| 1,2,3 | COMM | 326 | Small Group Discussion Methods | 3 | | | | |
| 2 | COMM | 405 | Communications and Conflict | 3 | | | | |
| 2 | COMM | 535 | Communication Leadership | 3 | | | | |
| 1,2,3 | ENGL | 302 | Technical Writing | 3 | | | | |
| 1,2,3 | ENGL | 417 | Written Communication for Workplace | 3 | | | | |
| 1,2,3 | ENGL | 510 | Intro to Professional Writing | 3 | | | | |
| 1,2 | ENGL | 516 | Written Communication for Sciences | 3 | | | | |
| 1 | FNDH | 643 | Food Writing | 3 | | | | |
| 1,2 | MKTG | 542 | Professional Selling and Sales | 3 | | | | |
| | | | ANY FOREIGN LANGUAGE | 3-5 | | | | |

1= FALL 2= SPRING 3= SUMMER AY= Alternate yrs. OY= Odd yrs. EY= Even yrs.

Other professional electives can be substituted as appropriate by checking with the Chair of the FDSCI program.