October 23, 2014

To: Dean Van Galen, Chancellor  
116 North Hall  
University of Wisconsin-River Falls

From: David P. Rainville, Chair  
Faculty Senate  
University of Wisconsin-River Falls

Re: UWRF Faculty Senate Motion 2014-15/29

At the October 22, 2014 meeting of the University of Wisconsin-River Falls Faculty Senate, motion 2014-15/29 was passed and is effective immediately. The motion is forwarded to you for your action.

A motion from the Academic Programs and Policies Committee (James Zimmerman, Chair) to approve a program/name change for a Food Processing Technology minor (currently Food Science minor). See attached

Approved ✔

Disapproved

_________________________
Dean Van Galen, Chancellor

_________________________
Date 10/25/14
TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:

1. Program Title: Food Processing Technology Minor
2. Department(s): Animal & Food Science
3. College(s): CAFES
4. Proposal prepared by: Gary Onan Date: 5/12/2014
5. Check all that apply

☐ New program  ☐ Existing program
☐ Change in course name  ☐ Change in number of credits
☐ Change in major  ☑ Change in minor
☐ Change in course content  ☐ Change in emphasis/option

6. Other Programs/Departments Consulted (Requires letters of comment from all Departments or Programs substantially affected):

   a.) AGEN  b.) AGEC  c.) PES  d.) AGED

7. Catalog year (and semester) of Implementation: Semester Fall  Spring Year 2014-2015

8. Have all courses in this program been approved? Yes ☐  No ☑

   If “No” which courses have not been approved? fruit and vegetable processing/preservation

9. Attach Request Narrative

   Include in narrative on attached pages a rationale for the requested changes or creation of program.
   Include clarification concerning any courses that have not yet been approved. If requesting a
   program change also include a listing of course array for both the current and proposed program?

10. UNIT APPROVALS: Requires signatures of all Department Chairs and Deans whose programs will
    be substantially affected by the changes or proposal. Signature lines for the affected Departments and
    Colleges (noted in “6” above), are on the addendum to this form. These signatures should be obtained
    prior to review by all other shared governance levels.

    Department Curriculum
    Committee Chair (optional)

    Department/Program Chair ____________________________  5/14/14

    College Curriculum Committee Chair ____________________________  6/12/14

    Dean of College ____________________________  June 2, 2014

    University Curriculum Cmtt. Chair ____________________________  9/24/2014

    Academic Policy & Program Cmtt. Chair ____________________________  10/10/14

    Faculty Senate Chair ____________________________  10/24/14

    Provost / Vice Chancellor ____________________________  10/25/14

    Chancellor ____________________________  10/25/14

*NOTE: The master copy of this transmittal & accompanying documents must be filed in the Provost’s office upon
final approval. The Provost’s office will notify all appropriate administrative offices [Registrar, Dean(s), Department
Chair(s)] of approvals & necessary actions to implement changes.

Revised December 2012
### Signatures of Additional Department & Colleges Affected

<table>
<thead>
<tr>
<th>Position</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Department Chair</td>
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<td>Dean of College</td>
<td>[Signature]</td>
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TRANSMITTAL for UNDERGRADUATE PROGRAMS: Changes or Proposals - Addendum

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Revised December 2012
Proposal for Food Processing Technology Minor

May 9, 2014
Prepared by: Gary Onan, Chair, Animal & Food Science Department

This proposal contains four sections: Justification; Industry status and job availability; Curriculum; and Addenda.

Justification:
The Food Science and Technology major at UW-RF was officially suspended in 2010. During the intervening time, the Food Science minor has been active. However, it does not serve the needs of our students or the industry particularly well as it is currently structured. Therefore, we propose to replace the existing Food Science minor with the Food Processing Technology minor.

Students, particularly those with majors that focus on production of animals and crops that provide the raw materials for food processing would benefit from exposure to applicable food processing techniques. Some of the expected benefits would include a heightened perspective of the ultimate fate of the commodity they are producing and how their production practices impact the final product, and increased employability in key food processing industries. This has long been a part of Animal Science programs with a meat animal (livestock) focus. Traditionally, an introductory-level meat science class has been a part of that curriculum. This has traditionally not been the case for Dairy Science or Crop & Soils or Horticulture programs. Typically those students have very little opportunity to develop an understanding of, or gain hands-on skills applicable to, the processing of the products they are growing. The proposed Food Processing Technology minor will allow students with such an interest to gain a significant amount of theoretical and practical background in food product processing.

There has been considerable consultation with dairy processors in recent months as part of the fund development campaign for the Dairy Pilot Plant renovation. It has become abundantly clear from those interactions, that industry leaders are very interested in hiring new graduates who have an educational background that couples basic and applied science with practical hands-on experience in manufacturing food products. Relative to the existing Food Science minor, the proposed Food Processing Technology minor has expanded opportunities to include a greater amount of practical experience, while still maintaining a level of science education adequate for understanding those practical principles. For example, the new course recently developed for this minor, FDSC 235, Agricultural Microbiology gives students a good foundation in general microbiology but does so by focusing on both beneficial and detrimental microbes important in food manufacture, or animal and crop health and well-being. Because this course does not require a prerequisite of BIOL 324, Microbiology, as did its predecessor, FDSC 335, Food Microbiology, it allows students to acquire the most critical information necessary to be a productive employee of the food processing company within the credit constraints of a minor.
Industry Status and Job Availability:

Wisconsin and Minnesota typically rank in the top 25% - 50% of states (top 25% in most categories) in the number of workers employed in food manufacturing industries (U.S. Bureau of Labor Statistics). There are currently in excess of 1000 food manufacturing/processing establishments in Wisconsin (Midwest Food Processors Association) of which 397 are dairy plants, 269 are meat plants, and 35 are vegetable or fruit canning plants (WI Dept. of Agriculture, Trade and Consumer Protection & Midwest Food Processors Association). Minnesota currently has in excess of 2500 food companies (University of Minnesota) representing a wide variety of food sectors.

Most UW – RF graduates who pursue careers within the food industries initially obtain positions as production line supervisors, quality control technicians, or procurement and sales positions. Starting salaries for these positions range from $35,000 to $60,000 per year (personal observation). Positions within the food industries typically result in rapid advancement and very desirable compensation levels once some experience is developed. The following table from the Institute of Food Technologists is an example of earning potential based on degree obtained:

<table>
<thead>
<tr>
<th>Type of employer</th>
<th>BS</th>
<th>MS</th>
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<th>MBA</th>
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<tbody>
<tr>
<td>Food/beverage manufacturer/processor</td>
<td>$75,500</td>
<td>$84,500</td>
<td>$110,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Food ingredient manufacturer/supplier</td>
<td>$84,000</td>
<td>$85,750</td>
<td>$116,000</td>
<td>$118,000</td>
</tr>
<tr>
<td>Processing equipment manufacturer/supplier</td>
<td>$96,000</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Consulting</td>
<td>$79,750</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Educational institution</td>
<td>*</td>
<td>$68,000</td>
<td>$90,000</td>
<td>*</td>
</tr>
<tr>
<td>Food Service</td>
<td>$88,000</td>
<td>$91,000</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Food Retailer</td>
<td>$82,000</td>
<td>$84,000</td>
<td>*</td>
<td>*</td>
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<tr>
<td>Government</td>
<td>*</td>
<td>$89,571</td>
<td>$111,500</td>
<td>*</td>
</tr>
<tr>
<td>Scientific/Trade Organization</td>
<td>*</td>
<td>$107,000</td>
<td>$106,500</td>
<td>*</td>
</tr>
<tr>
<td>Testing Laboratory</td>
<td>$72,000</td>
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<td>*</td>
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<tr>
<td>Other</td>
<td>$78,280</td>
<td>$94,731</td>
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*Survey respondents did not include representatives from these groups.

Graduates with minors in Food Processing will clearly not garner these wages upon first entering their career, but clearly the potential to attain these levels of compensation is available for those who perform well in their chosen profession.
Industry Status and Job Availability:

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*Survey respondents did not include representatives from these groups.

Graduates with minors in Food Processing will clearly not garner these wages upon first entering their career, but clearly the potential to attain these levels of compensation is available for those who perform well in their chosen profession.
Curriculum:
The Food Processing Technology minor will include the following courses:

- FDSC 110 The Science of Food, 3 cr.
  - This is the introductory Food Science course and serves as one of the Foundations in Agriculture courses for CAFES (also known as Foundations in CAFES)
  - This course also has an S designator (non-lab science course) for General Education at UW-RF
  - As such, many students who may desire this minor have already taken this course to meet some other requirement

- FDSC 113 Introduction to Food Science Laboratory, 1 cr.
  - A laboratory study of common methods of food preservation, chemical preservation, canning, freezing, dehydration, packaging and sensory evaluation

- FDSC 235 Agricultural Microbiology, 3 cr.
  - Agricultural Microbiology is an introduction to microbiology with an emphasis on agricultural applications
  - This applied microbiology course allows students the opportunity to learn basic microbiology with a focus on the microorganisms affecting animal, plant and food production. This course does not have a laboratory component but includes demonstrations of techniques and their relevance to the organisms discussed.

- FDSC 320 Food Quality Assurance, 3 cr.
  - Factors affecting the quality of food products such as appearance, flavor, texture, nutritional value, safety and wholesomeness. The organization of quality control with emphasis on TQM and HACCP. Principles of Statistical Quality Control.
  - This course has recently been updated and approved as a three credit offering (it was formerly a two credit course with a food quality focus only) with additional content focused on current food safety regulations and control principles.

- FDSC 361 Food Ingredients and Analysis, 3 cr.
  - This course includes the explanation and use of different food ingredients; why certain ingredients are used in foods; and how foods are analyzed.
  - This course is a new offering combining the most critical elements of two former separate offerings in food chemistry and food analysis.

- Directed Electives, 6 cr.
  - FDSC/ANSC 238 Meat and Meat Products AND FDSC/ANSC 240 Meat Product Processing
  - FDSC 202 Dairy Manufacturing I AND FDSC 302 Dairy Manufacturing II
  - AGEN 352 Food and Process Engineering AND AGEN 455 Advanced Food and Process Engineering
  - A pair of courses suitable for students with a fruit & vegetable processing interest will be developed going forward.
  - The intent of this requirement is to allow students to develop adequate background and proficiency in a commodity such that they are job-ready for entry level positions within that industry segment.
• Electives: 3 cr.
  o Any commodity courses not taken to meet Directed Electives
  o AGBI 251 Agricultural Biochemistry, 3 cr. and AGBI 252 Agricultural Biochemistry Lab, 1 cr.
  o BIOL 324 Microbiology, 4 cr.
  o CHEM 360 Foundations of Biochemistry, 4 cr.
  o FDSC 422 Product Development and Sensory Evaluation of Foods, 4 cr.
  o FDSC 270 Internship I or FDSC 370 Internship II, 2-4 cr.
  o FDSC 490 Independent Study (credits assigned based on learning contact hours):
    ▪ Certifications achieved through shortcourses such as Pasteurization Short Course; Milk Hauler’s License Course; Cheesemaker’s Workshop; Meat Processing Workshop; and others

• Total Credits: 22 - 24

The curriculum is designed to accomplish these learning objectives:
• Students will demonstrate knowledge of basic scientific principles upon which food processing is founded
  o FDSC 110
  o FDSC 113
  o FDSC 361
  o Directed Electives
• Students will demonstrate knowledge of food safety and quality assurance principles
  o FDSC 235
  o FDSC 320
  o Directed Electives
• Students will demonstrate practical skills in food manufacturing
  o FDSC 361
  o Directed Electives
  o Electives

Addenda:
The following items are included:
• Comparison of Food Processing Technology minor and Food Science minor
• Letters of support
• Electives: 3 cr.
  o Any commodity courses not taken to meet Directed Electives
  o AGBI 251 Agricultural Biochemistry, 3 cr. and AGBI 252 Agricultural Biochemistry Lab, 1 cr.
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• Students will demonstrate practical skills in food manufacturing
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Addenda:
The following items are included:
• Comparison of Food Processing Technology minor and Food Science minor
• Letters of support
Food Processing Technology Minor Course Summary

Food Processing Technology Minor:

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<td>FDSC 113</td>
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<td>FDSC 238&amp;240; OR</td>
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<td>AGEN 352&amp;455</td>
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<td>Electives:</td>
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<tr>
<td>Any additional course from Directed Electives;</td>
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<tr>
<td>AGBI 251 and 252;</td>
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<td>CHEM 360;</td>
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<td>BIOL 324;</td>
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<td>FDSC 490: Pasteurization Short Course; Milk Hauler’s License Course; Cheesemaker’s Workshop; Meat Processing Workshop, etc.</td>
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<td>FDSC 202, 238 or 259</td>
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<tr>
<td>FDSC 302, 240 or 312 &amp; 313</td>
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<tr>
<td>Electives (6 credits must be 300 or above):</td>
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<tr>
<td>BIOL 324; CHEM 355; CHEM 361 or AGBI 252 &amp; 252; AGEN 352; other FDSC courses</td>
<td>10-12</td>
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<td>22-24</td>
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Hi Gary,

The Department of Agricultural Economics Supports the changes proposed to the Food Science Technology program.

David
From: James Graham  
Sent: Monday, May 19, 2014 9:54 AM  
To: Gary Onan  
Subject: RE: New Food Processing Technology Minor

Gary,

The Agricultural Education Department supports the Food Processing Technology minor as proposed.

Dr. James Graham

From: Gary Onan  
Sent: Wednesday, May 14, 2014 3:46 PM  
To: Donavon Taylor; Joseph Shakal; James Graham; David Trechter  
Subject: New Food Processing Technology Minor

Gentlemen,

Attached is a proposal for a change in the Food Science minor to a Food Processing Technology minor. Please review and let me know if you have questions or need clarification. I would also appreciate an email indicating your support for this minor as it goes forward to CAFES Curriculum Committee (perhaps yet this week).

Thanks,

Gary

Gary W. Onan, Ph.D., PAS  
Professor & Chair  
Animal & Food Science Dept.  
University of Wisconsin River Falls  
715-425-3704 Office  
715-307-0927 Cell
From: Joseph Shakal  
Sent: Wednesday, May 21, 2014 12:15 PM  
To: Gary Onan  
Subject: RE: New Food Processing Technology Minor  

Gary  
The Department of Agricultural Engineering Technology supports the new Food processing Technology minor.  
Thanks  
Joe  

Joseph Shakal, Ph.D.  
Associate Professor and Department Chair  
Agricultural Engineering Technology  
University of Wisconsin-River Falls  
410 S 3rd St. River Falls, WI 54022  
TEL: 715-425-3983

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Gary  

Gary W. Onan, Ph.D., PAS  
Professor & Chair  
Animal & Food Science Dept.  
University of Wisconsin River Falls  
715-425-3704 Office  
715-307-0927 Cell
Hi Gary,

The Plant and Earth Science Department supports the proposed Food Processing Technology Minor. The minor, as proposed, will be more attractive to students majoring in Crop and Soil Science or Horticulture as compared to the minor it is replacing. Thanks for the development of new courses to support the minor.

Thanks,
Donavon Taylor, Chair
Plant and Earth Science Department

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final approval. The Provost’s office will notify all appropriate administrative offices [Registrar, Dean(s), Department
Chair(s)] of approvals & necessary actions to implement changes.

Revised December 2012
TRANSMITTAL for UNDERGRADUATE PROGRAMS: Changes or Proposals - Addendum

Signatures of Additional Department & Colleges Affected

<table>
<thead>
<tr>
<th>Position</th>
<th>Signature</th>
<th>Date</th>
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<td>6-2-14</td>
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<tr>
<td>Dean of College</td>
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Signature Date

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Revised December 2012
Proposal for Food Processing Technology Minor

May 9, 2014
Prepared by: Gary Onan, Chair, Animal & Food Science Department

This proposal contains four sections: Justification; Industry status and job availability; Curriculum; and Addenda.

Justification:
The Food Science and Technology major at UW-RF was officially suspended in 2010. During the intervening time, the Food Science minor has been active. However, it does not serve the needs of our students or the industry particularly well as it is currently structured. Therefore, we propose to replace the existing Food Science minor with the Food Processing Technology minor.

Students, particularly those with majors that focus on production of animals and crops that provide the raw materials for food processing would benefit from exposure to applicable food processing techniques. Some of the expected benefits would include a heightened perspective of the ultimate fate of the commodity they are producing and how their production practices impact the final product, and increased employability in key food processing industries. This has long been a part of Animal Science programs with a meat animal (livestock) focus. Traditionally, an introductory-level meat science class has been a part of that curriculum. This has traditionally not been the case for Dairy Science or Crop & Soils or Horticulture programs. Typically those students have very little opportunity to develop an understanding of, or gain hands-on skills applicable to, the processing of the products they are growing. The proposed Food Processing Technology minor will allow students with such an interest to gain a significant amount of theoretical and practical background in food product processing.

There has been considerable consultation with dairy processors in recent months as part of the fund development campaign for the Dairy Pilot Plant renovation. It has become abundantly clear from those interactions, that industry leaders are very interested in hiring new graduates who have an educational background that couples basic and applied science with practical hands-on experience in manufacturing food products. Relative to the existing Food Science minor, the proposed Food Processing Technology minor has expanded opportunities to include a greater amount of practical experience, while still maintaining a level of science education adequate for understanding those practical principles. For example, the new course recently developed for this minor, FDSC 235, Agricultural Microbiology gives students a good foundation in general microbiology but does so by focusing on both beneficial and detrimental microbes important in food manufacture, or animal and crop health and well-being. Because this course does not require a prerequisite of BIOL 324, Microbiology, as did its predecessor, FDSC 335, Food Microbiology, it allows students to acquire the most critical information necessary to be a productive employee of the food processing company within the credit constraints of a minor.
Industry Status and Job Availability:

Wisconsin and Minnesota typically rank in the top 25% - 50% of states (top 25% in most categories) in the number of workers employed in food manufacturing industries (U.S. Bureau of Labor Statistics). There are currently in excess of 1000 food manufacturing/processing establishments in Wisconsin (Midwest Food Processors Association) of which 397 are dairy plants, 269 are meat plants, and 35 are vegetable or fruit canning plants (WI Dept. of Agriculture, Trade and Consumer Protection & Midwest Food Processors Association). Minnesota currently has in excess of 2500 food companies (University of Minnesota) representing a wide variety of food sectors.

Most UW - RF graduates who pursue careers within the food industries initially obtain positions as production line supervisors, quality control technicians, or procurement and sales positions. Starting salaries for these positions range from $35,000 to $60,000 per year (personal observation). Positions within the food industries typically result in rapid advancement and very desirable compensation levels once some experience is developed. The following table from the Institute of Food Technologists is an example of earning potential based on degree obtained:

<table>
<thead>
<tr>
<th>Type of employer</th>
<th>BS</th>
<th>MS</th>
<th>Ph.D.</th>
<th>MBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/beverage manufacturer/processor</td>
<td>$75,500</td>
<td>$84,500</td>
<td>$110,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Food Ingredient manufacturer/supplier</td>
<td>$84,000</td>
<td>$85,750</td>
<td>$116,000</td>
<td>$118,000</td>
</tr>
<tr>
<td>Processing equipment manufacturer/supplier</td>
<td>$96,000</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Consulting</td>
<td>$79,750</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Educational institution</td>
<td>*</td>
<td>$68,000</td>
<td>$90,000</td>
<td>*</td>
</tr>
<tr>
<td>Food Service</td>
<td>$88,000</td>
<td>$91,000</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Food Retailer</td>
<td>$82,000</td>
<td>$84,000</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Government</td>
<td>*</td>
<td>$89,571</td>
<td>$111,500</td>
<td>*</td>
</tr>
<tr>
<td>Scientific/Trade Organization</td>
<td>*</td>
<td>$107,000</td>
<td>$106,500</td>
<td>*</td>
</tr>
<tr>
<td>Testing Laboratory</td>
<td>$72,000</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Other</td>
<td>$78,280</td>
<td>$94,731</td>
<td>$100,000</td>
<td>*</td>
</tr>
</tbody>
</table>

*Survey respondents did not include representatives from these groups.

Graduates with minors in Food Processing will clearly not garner these wages upon first entering their career, but clearly the potential to attain these levels of compensation is available for those who perform well in their chosen profession.
Curriculum:
The Food Processing Technology minor will include the following courses:

- **FDSC 110 The Science of Food**, 3 cr.
  - This is the introductory Food Science course and serves as one of the Foundations in Agriculture courses for CAFES (also known as Foundations in CAFES)
  - This course also has an S designator (non-lab science course) for General Education at UW-RF
  - As such, many students who may desire this minor have already taken this course to meet some other requirement

- **FDSC 113 Introduction to Food Science Laboratory**, 1 cr.
  - A laboratory study of common methods of food preservation, chemical preservation, canning, freezing, dehydration, packaging and sensory evaluation

- **FDSC 235 Agricultural Microbiology**, 3 cr.
  - Agricultural Microbiology is an introduction to microbiology with an emphasis on agricultural applications
  - This applied microbiology course allows students the opportunity to learn basic microbiology with a focus on the microorganisms affecting animal, plant and food production. This course does not have a laboratory component but includes demonstrations of techniques and their relevance to the organisms discussed.

- **FDSC 320 Food Quality Assurance**, 3 cr.
  - Factors affecting the quality of food products such as appearance, flavor, texture, nutritional value, safety and wholesomeness. The organization of quality control with emphasis on TQM and HACCP. Principles of Statistical Quality Control.
  - This course has recently been updated and approved as a three credit offering (it was formerly a two credit course with a food quality focus only) with additional content focused on current food safety regulations and control principles.

- **FDSC 361 Food Ingredients and Analysis**, 3 cr.
  - This course includes the explanation and use of different food ingredients; why certain ingredients are used in foods; and how foods are analyzed.
  - This course is a new offering combining the most critical elements of two former separate offerings in food chemistry and food analysis.

- **Directed Electives**, 6 cr.
  - FDSC/ANSC 238 Meat and Meat Products **AND** FDSC/ANSC 240 Meat Product Processing
  - FDSC 202 Dairy Manufacturing I **AND** FDSC 302 Dairy Manufacturing II
  - AGEN 352 Food and Process Engineering **AND** AGEN 455 Advanced Food and Process Engineering
  - A pair of courses suitable for students with a fruit & vegetable processing interest will be developed going forward.
  - The intent of this requirement is to allow students to develop adequate background and proficiency in a commodity such that they are job-ready for entry level positions within that industry segment.
• Electives: 3 cr.
  o Any commodity courses not taken to meet Directed Electives
  o AGBI 251 Agricultural Biochemistry, 3 cr. and AGBI 252 Agricultural Biochemistry Lab, 1 cr.
  o BIOL 324 Microbiology, 4 cr.
  o CHEM 360 Foundations of Biochemistry, 4 cr.
  o FDSC 422 Product Development and Sensory Evaluation of Foods, 4 cr.
  o FDSC 270 Internship I or FDSC 370 Internship II, 2-4 cr.
  o FDSC 490 Independent Study (credits assigned based on learning contact hours):
    • Certifications achieved through shortcourses such as Pasteurization Short Course; Milk Hauler’s License Course; Cheesemaker’s Workshop; Meat Processing Workshop; and others

• Total Credits: 22 - 24

The curriculum is designed to accomplish these learning objectives:
• Students will demonstrate knowledge of basic scientific principles upon which food processing is founded
  o FDSC 110
  o FDSC 113
  o FDSC 361
  o Directed Electives
• Students will demonstrate knowledge of food safety and quality assurance principles
  o FDSC 235
  o FDSC 320
  o Directed Electives
• Students will demonstrate practical skills in food manufacturing
  o FDSC 361
  o Directed Electives
  o Electives

Addenda:
The following items are included:
• Comparison of Food Processing Technology minor and Food Science minor
• Letters of support
## Food Processing Technology Minor Course Summary

**Food Processing Technology Minor:**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FDSC 110</td>
<td>3</td>
</tr>
<tr>
<td>FDSC 113</td>
<td>1</td>
</tr>
<tr>
<td>FDSC 235</td>
<td>3</td>
</tr>
<tr>
<td>FDSC 320</td>
<td>3</td>
</tr>
<tr>
<td>FDSC 361</td>
<td>3</td>
</tr>
<tr>
<td>Directed Electives:</td>
<td>6</td>
</tr>
<tr>
<td>FDSC 202&amp;302; OR</td>
<td></td>
</tr>
<tr>
<td>FDSC 238&amp;240; OR</td>
<td></td>
</tr>
<tr>
<td>AGEN 352&amp;455</td>
<td></td>
</tr>
<tr>
<td>Electives:</td>
<td>3-5</td>
</tr>
<tr>
<td>Any additional course from</td>
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</tr>
<tr>
<td>Directed Electives;</td>
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</tr>
<tr>
<td>AGBI 251 and 252;</td>
<td></td>
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<tr>
<td>CHEM 360;</td>
<td></td>
</tr>
<tr>
<td>BIOL 324;</td>
<td></td>
</tr>
<tr>
<td>FDSC 422;</td>
<td></td>
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<tr>
<td>FDSC 270 or 370</td>
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<tr>
<td>FDSC 490: Pasteurization Short</td>
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<tr>
<td>Course; Milk Hauler’s License</td>
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<tr>
<td>Course; Cheesemaker’s Workshop</td>
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<tr>
<td>Meat Processing Workshop, etc.</td>
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<td><strong>Total:</strong></td>
<td>22-24</td>
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## Current Food Science Minor:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FDSC 110</td>
<td>3</td>
</tr>
<tr>
<td>FDSC 113</td>
<td>1</td>
</tr>
<tr>
<td>FDSC 202, 238 or 259</td>
<td>3</td>
</tr>
<tr>
<td>FDSC 302, 240 or 312 &amp; 313</td>
<td>3-5</td>
</tr>
<tr>
<td>Electives (6 credits must be</td>
<td>10-12</td>
</tr>
<tr>
<td>300 or above):</td>
<td></td>
</tr>
<tr>
<td>BIOL 324; CHEM 355; CHEM 361</td>
<td></td>
</tr>
<tr>
<td>or AGBI 252 &amp; 252; AGEN 352;</td>
<td></td>
</tr>
<tr>
<td>other FDSC courses</td>
<td></td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>22-24</td>
</tr>
</tbody>
</table>
Hi Gary,

The Department of Agricultural Economics supports the changes proposed to the Food Science Technology program.

David
From: James Graham
Sent: Monday, May 19, 2014 9:54 AM
To: Gary Onan
Subject: RE: New Food Processing Technology Minor

Gary,

The Agricultural Education Department supports the Food Processing Technology minor as proposed.

Dr. James Graham

From: Gary Onan
Sent: Wednesday, May 14, 2014 3:46 PM
To: Donovan Taylor; Joseph Shakal; James Graham; David Trechter
Subject: New Food Processing Technology Minor

Gentlemen,

Attached is a proposal for a change in the Food Science minor to a Food Processing Technology minor. Please review and let me know if you have questions or need clarification. I would also appreciate an email indicating your support for this minor as it goes forward to CAFES Curriculum Committee (perhaps yet this week).

Thanks,

Gary

Gary W. Onan, Ph.D., PAS
Professor & Chair
Animal & Food Science Dept.
University of Wisconsin River Falls
715-425-3704 Office
715-307-0927 Cell
From: Joseph Shakal  
Sent: Wednesday, May 21, 2014 12:15 PM  
To: Gary Onan  
Subject: RE: New Food Processing Technology Minor

Gary  
The Department of Agricultural Engineering Technology supports the new Food processing Technology minor.  
Thanks  
Joe

Joseph Shakal, Ph.D.  
Associate Professor and Department Chair  
Agricultural Engineering Technology  
University of Wisconsin-River Falls  
410 S 3rd St. River Falls, WI 54022  
TEL: 715-425-3985

From: Gary Onan  
Sent: Wednesday, May 14, 2014 3:46 PM  
To: Donavon Taylor; Joseph Shakal; James Graham; David Trechter  
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Thanks,

Gary

Gary W. Onan, Ph.D., PAS  
Professor & Chair  
Animal & Food Science Dept.  
University of Wisconsin River Falls  
715-425-3704 Office  
715-307-0927 Cell
From: Donavon Taylor  
Sent: Monday, May 19, 2014 3:05 PM  
To: Gary Onan  
Subject: RE: New Food Processing Technology Minor

Hi Gary,

The Plant and Earth Science Department supports the proposed Food Processing Technology Minor. The minor, as proposed, will be more attractive to students majoring in Crop and Soil Science or Horticulture as compared to the minor it is replacing. Thanks for the development of new courses to support the minor.

Thanks,
Donavon Taylor, Chair
Plant and Earth Science Department

From: Gary Onan  
Sent: Wednesday, May 14, 2014 3:46 PM  
To: Donavon Taylor; Joseph Shkalk; James Graham; David Trechter  
Subject: New Food Processing Technology Minor

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