

<b>Fiscal Unit/Academic Org</b>	Animal Sciences - D1132
<b>Administering College/Academic Group</b>	Food, Agric & Environ Science
<b>Co-administering College/Academic Group</b>	
<b>Semester Conversion Designation</b>	New Program/Plan
<b>Proposed Program/Plan Name</b>	Dairy Science Minor
<b>Type of Program/Plan</b>	Undergraduate minor
<b>Program/Plan Code Abbreviation</b>	DAIRY-M
<b>Proposed Degree Title</b>	

## Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program				15	
Required credit hours offered by the unit	Minimum			12	
	Maximum			15	
Required credit hours offered outside of the unit	Minimum			0	
	Maximum			3	
Required prerequisite credit hours not included above	Minimum			0	
	Maximum			0	

## Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

**Program Learning Goals** •

## Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

**Is this a degree program (undergraduate, graduate, or professional) or major proposal?** No

## Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

## Pre-Major

**Does this Program have a Pre-Major?** No

## Attachments

- Chair Letter - minors.pdf  
(Letter from Program-offering Unit. Owner: Zerby, Henry Nevin)
- FST Concur.doc  
(Support/Concurrence Letters. Owner: Zerby, Henry Nevin)
- CoverletterMinor.doc: College Coverletter  
(Letter from the College to OAA. Owner: Pfister, Jill Ann)
- Dairy Science Minor Rationale.docx  
(Program Rationale Statement. Owner: Zerby, Henry Nevin)
- Dairy Science Minor logo.docx  
(Semester Advising Sheet(s). Owner: Zerby, Henry Nevin)
- Dairy Science Revised ASC Advising Sheet.doc  
(Semester Advising Sheet(s). Owner: Zerby, Henry Nevin)
- Dairy Science Revised ASC Advising Sheet 3-14-13.doc: Revised ASC advising sheet  
(Semester Advising Sheet(s). Owner: Vankeerbergen, Bernadette Chantal)

## Comments

- I have incorporated the suggested changes from the ASCC Natural and Mathematical Sciences Panel into the rationale and the semester advising sheets. (by Zerby, Henry Nevin on 02/02/2013 12:42 PM)
- 1-22-13: See e-mail to H. Zerby. (by Vankeerbergen, Bernadette Chantal on 01/22/2013 09:33 AM)
- Now that we have revised the minor sheets please be sure the one approved by the College is included. You will receive at COAA tomorrow. We also need rationale etc. (by Pfister, Jill Ann on 11/27/2012 05:05 PM)

## Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Zerby, Henry Nevin	11/21/2012 06:33 AM	Submitted for Approval
Revision Requested	Pfister, Jill Ann	11/27/2012 05:05 PM	Unit Approval
Submitted	Zerby, Henry Nevin	11/28/2012 02:28 PM	Submitted for Approval
Revision Requested	Pfister, Jill Ann	11/28/2012 09:47 PM	Unit Approval
Submitted	Zerby, Henry Nevin	11/28/2012 09:53 PM	Submitted for Approval
Approved	Pfister, Jill Ann	11/29/2012 08:19 PM	Unit Approval
Approved	Pfister, Jill Ann	11/29/2012 08:27 PM	College Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	01/22/2013 09:33 AM	ASCCAO Approval
Submitted	Zerby, Henry Nevin	02/02/2013 12:42 PM	Submitted for Approval
Approved	Pfister, Jill Ann	02/27/2013 09:02 PM	Unit Approval
Approved	Pfister, Jill Ann	02/27/2013 09:05 PM	College Approval
Pending Approval	Nolen, Dawn Jenkins, Mary Ellen Bigler Vankeerbergen, Bernadette Chantal Hogle, Danielle Nicole Hanlin, Deborah Kay	02/27/2013 09:05 PM	ASCCAO Approval



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November 29, 2012

Randy Smith  
Vice Provost  
203 Bricker Hall  
190 North Oval Mall  
CAMPUS

Randy Smith:

The College of Food, Agricultural, and Environmental Sciences is pleased to submit two new minors: Dairy Science and Human and Animal Interactions. These minors have been submitted and approved by the department of Animal Sciences and approved unanimously by the College Committee on Academic Affairs on November 15, 2012. They are developed according to the College's guidelines for minors and we would like these minors available for use as soon as they are approved.

Thank you for your consideration.

Sincerely,

*Jill A. Pfister*

Jill A. Pfister  
Assistant Dean, Academic Affairs  
And College Secretary



Jill Pfister  
Assistant Dean, Academic Affairs and College Secretary  
College of Food, Agricultural, and Environmental Sciences

November 19, 2012

Dear Jill:

On behalf of the faculty of the Department of Animal Sciences, I am presenting two new minors for approval. The names of these minors are Dairy Science Minor and Human and Animal Interactions Minor. Both minors were initiated within the Department during the Q2S transition. However, it was decided at that time to delay their full development until time permitted. The faculty and the Academic Affairs Committee of the Department of Animal Sciences have approved both minors. Dairy Science is recognized as strength within the Department and is supported by several faculty members. The recent success of our OSU teams in the North American Intercollegiate Dairy Challenge Contest has brought desirable visibility to our program. During the past eight years, the Department has increased its focus on animal behavior, animal welfare, and human and animal interactions in its teaching, research, and extension programs. This is an area that has also received greater attention within the State of Ohio in recent years at various levels. To further support this discipline and to enhance the Department's capacity to respond to increased interest from students, stakeholders, and the community at large, we are in the process of filling an additional faculty position in this area. Letters of concurrence have been requested and granted from the Department of Food Science & Technology and from The School of Environment & Natural Resources for the Dairy Science Minor and the Human and Animal Interactions Minor, respectively.

Thank you for your consideration of these two new minors. If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Ronald S. Kensinger".

Ronald S. Kensinger  
Chair and Professor  
Department of Animal Sciences

## DAIRY SCIENCE MINOR

### **Rationale**

The Dairy Science Minor was developed to provide students who are enrolled in programs outside of the Department of Animal Sciences an opportunity to gain additional knowledge and experience with the Dairy Industry. Several students pursuing majors in communication, agricultural systems, marketing, and business have expressed interest in a minor that provides a background in the dairy industry to aid them in pursuing employment within their respective field as it relates to the dairy industry or its allied partners. The courses have been structured to ensure an adequate base of knowledge about dairy science, as well as an opportunity to specialize within a discipline of the student's choice (i.e., nutrition, genetics, physiology, grazing and management, or dairy products).

### **Resources, advising and administration, additional expenses**

Faculty and staff of the Department of Animal Sciences who routinely advise several of our majors who are also pursuing a career in the dairy industry or dairy related industries will conduct advising and administration for this minor. Thus, they are very familiar with the courses available in the minor and their respective prerequisites and semesters of offering. We anticipate five to ten students enrolling in the minor in its first year and approximately 15 – 20 students enrolling in the minor in subsequent years.

The minor will not require additional resources or expenses, as the classes involved in the minor are also courses that currently serve students in the animal science curriculum.

### **Program Learning Goals**

1. Learn about the scope of the dairy industry and its economic value to society.
2. Learn about the biological principles involved in the growth and milk production of dairy animals.
3. Appreciate the breadth of knowledge used to solve problems and integrate solutions in a profitable dairy enterprise.

### **Program Learning Outcomes**

After completing the Dairy Science Minor, students should be able to:

- Describe or provide an overview of the production systems associated with the dairy industry,
- Explain the nutritional needs and physiological focuses (digestive system, reproductive system, mammary system, etc.) of dairy animals,
- Have an awareness of health related challenges at multiple stages of the life and lactation cycles of dairy animals, and

- Integrate the discipline of their major into career opportunities within the dairy industry.

## Assessment

Direct Measures - Review of feedback and assessment from classes in the minor

- Embedded short answer examination questions,
- Regular in-class short writing assignments associated with lectures,
- Participation in guided discussion and scenarios (e.g., ethics and moral reasoning) via analysis/discussion/presentation in small groups during recitation sessions,
- Rubrics used in grading written assignments will have sub-scores addressing these learning objectives, and
- Tracking of employment to determine number of students with careers in the dairy industry.

Indirect Measures – Review Graduating Senior Evaluation and Feedback

- Student survey and
- Student evaluation of instruction.

Assessment data will be used to:

- Analyze and discuss trends with the unit's faculty,
- Analyze and report to the College,
- Make improvements in curricular requirements (e.g., add, subtract courses),
- Make improvements in course delivery and learning activities within courses, and
- Make improvements in learning facilities, laboratories, and/or equipment.

## List of Courses

	Credit Hours	Offering
ANIMSCI 2200.01 Introduction to Animal Sciences	3	AU & SP
ANIMSCI 2400.07 Global Dairy Industries	1	SP
ANIMSCI 2507 Challenges and Opportunities for the Dairy Industry	1	SP
ANIMSCI 3130 Nutrition	3	AU & SP
ANIMSCI 3140 Physiology	3	AU & SP
ANIMSCI 3147 Milk Secretion	2	SP
ANIMSCI 3150 Genetics	3	AU & SP
ANIMSCI 3160 Reproduction	2	AU & SP
ANIMSCI 3170 Health I	2	AU & SP
ANIMSCI 3307 Dairy Cattle Evaluation	2	SP
ANIMSCI 3400 Management Intensive Grazing	2	AU
ANIMSCI 3797.07 Dairy Industry Outside the U.S.	2	SP
ANIMSCI 4007 Dairy Herd Management	3	AU
FDSCTE 5420 Dairy Processing	3	SP

**The Ohio State University**  
**College of Food, Agricultural, and Environmental Sciences**  
**Approved by the College of Arts and Sciences**

**Dairy Sciences Minor**

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Dr. Maurice Eastridge, Coordinating Adviser  
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The minor in Dairy Science is organized to provide students with an understanding of the scope of the dairy industry and the flexibility to develop an additional focus within a specific discipline within the dairy industry (i.e. nutrition, physiology, genetics, reproduction, or health).

The minor in Dairy Science consist of 15 credits of course work in dairy related courses. Some of the courses listed below may have prerequisites. Students will complete nine required credit hours (four courses) and then select six additional credit hours from a list of elective courses within the minor.

After the minor coordinating adviser in the Department of Animal Sciences has approved the Minor Program Form (listed above), you should file the form with your college or school counselor. For further information about the minor program, contact the department.

**Required Courses: 9 hours**

ANIMSCI 2200.01 (3), 2507 (1), 3147 (2), 4007 (3)

**Elective Courses: 6 hours**

ANIMSCI 2400.07 (1), 3130 (3), 3140 (3), 3150 (3), 3160 (2), 3170 (2), 3307 (2), 3400 (2), 3797.07 (2),

FDSCTE 5420 (3)

Collectively, the required courses and elective courses must total a minimum of 15 semester hours. At least 6 of the 15 credit hours must be at the 3000 level or above. The Dairy Science minor is not available to students majoring in Animal Sciences through the B.S. in Agriculture or B.S. in Nutrition.

**Dairy Science minor program guidelines**

Required for graduation No

Credit hours required A minimum of 15 credit hrs.

Transfer credit hours allowed No more than one half of the credit hours required on the minor

Overlap with the GE Permitted (a maximum of one course may overlap between the minor and the GE).

Overlap with the major Not allowed and

- The minor must be in a different subject than the major.
- The same courses cannot count on the minor and on the major.

Overlap between minors Each minor completed must contain 12 unique hours.

Grades required

- Minimum C- for a course to be listed on the minor.
- Minimum 2.00 cumulative point-hour ratio required for the minor.
- Course work graded Pass/Non-Pass cannot count on the minor.

Minor Approval The minor program description sheet must be approved by the minor coordinating advisor.

Filing the minor program form The minor program form must be filed at least by the time the graduation application is submitted to a college/school counselor.

Changing the minor Once the minor program is filed in the college office, any changes must be approved by the academic unit offering the minor.



## Food Science & Technology

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Henry Zerby  
Department of Animal Sciences

Henry

The Department of Food Science and Technology is supportive of the Dairy Science minor. The inclusion of our dairy processing course as an elective is appropriate.

Sincerely

A handwritten signature in black ink that reads "Mike Mangino".

Mike Mangino  
Professor  
Department of Food Science & Technology