

New Proposal

Date Submitted: 11/14/23 7:49 pm

Viewing: : **Dairy Nutrition for Udder Success, CERT (online)**

Last edit: 01/09/24 8:14 am

Changes proposed by: Debra Korte

In Workflow

1. U Program Review
2. 1538 Committee Chair
3. 1538 Head
4. KL Committee Chair
5. KL Dean
6. University Librarian
7. Grad_College
8. COTE Programs
9. Provost
10. Senate EPC
11. Senate
12. U Senate Conf
13. Board of Trustees
14. IBHE
15. HLC
16. DOE
17. DMI

Approval Path

1. 11/17/23 8:00 am
Donna Butler (dbutler):
Approved for U Program Review
2. 11/20/23 8:19 pm
Anna Dilger (adilger2):
Approved for 1538 Committee Chair
3. 11/21/23 6:54 am
Rodney W. Johnson (rwjohn):
Approved for 1538 Head
4. 11/21/23 9:53 am
Brianna Gregg (bjgray2):
Approved for KL

- Committee Chair
- 5. 11/21/23 10:41 am
Anna Ball (aball):
Approved for KL Dean
- 6. 11/26/23 11:50 am
Claire Stewart (clairest):
Approved for University Librarian
- 7. 12/13/23 4:24 pm
Allison McKinney (agrindly):
Approved for Grad_College
- 8. 12/13/23 6:45 pm
Suzanne Lee (suzannel):
Approved for COTE Programs
- 9. 12/14/23 3:28 pm
Brooke Newell (bsnewell):
Approved for Provost

Proposal Type

Proposal Type:
Major (ex. Special Education)

Administration Details

Official Program Name	Dairy Nutrition for Udder Success, CERT (online)	
Diploma Title	Certificate in Dairy Nutrition for Udder Success	
Sponsor College	Agr, Consumer & Env Sciences	
Sponsor Department	Animal Sciences	
Sponsor Name	Anna Ball, Associate Dean of Academic Programs	
Sponsor Email	aball@illinois.edu	
College Contact	Debra Korte	College Contact Email

dskorte@illinois.edu

College Budget Officer Nichole Isaac

College Budget Officer Email nmisaac@illinois.edu

List the role for rollbacks (which role will edit the proposal on questions from EPC, e.g., Dept Head or Initiator) and/or any additional stakeholders. Purpose: List here who will do the editing work if proposal needs rolled back. And any other stakeholders.

Debra Korte, dskorte@illinois.edu; Brianna Gregg, bjgray2@illinois.edu; Phil Cardoso (cardoso2@illinois.edu)

Does this program have inter-departmental administration?

No

Proposal Title

Effective Catalog Term Fall 2024

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberals Art and Sciences, include the Graduate College for Grad Programs)

Establish the Campus Graduate Certificate in Dairy Nutrition for Udder Success in the College of Agricultural, Consumer and Environmental Sciences and the Graduate College

Does this proposal have any related proposals that will also be revised during the next 6 weeks? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently. Example: If you are revising the BS proposal and one related concentration within the next 6 weeks, "This BS proposal (key 567) is related to the Concentration A proposal (key 145)."

Program Justification

Provide a brief justification of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates, when appropriate.

This proposal seeks the approval of a Graduate Certificate in Dairy Nutrition for Udder Success. This certificate will provide students with practical knowledge about dairy nutrition and management, and equip them with technical skills needed to optimize the health, nutrition, and milk quality of dairy livestock. Through a unique blend of theoretical knowledge, hands-on training, and cutting-edge technology applications, participants will demonstrate the skills to formulate a ration that meets dietary and production needs, use artificial intelligence to optimize animal health, and investigate the nutritional impact on milk quality and its composition. Graduates of this certificate will be able to create well-balanced diets that elevate the overall well-being and productivity of dairy herds.

Background --

With the development of online courses in animal health and production, the University of Illinois will continue its great tradition of contributing to advances in farming productivity, agricultural science, and technology at the state and national levels. However, this certificate will also expand its borders in a new way by sharing its knowledge and expertise with those involved in food and fiber production worldwide. We will share the on-campus educational experience with an online global audience of learners in the proposed Certificate. Given the hands-on nature of the discipline, Animal Sciences is especially well-positioned to explore creative possibilities in this space. The University of Illinois Dairy Research Center will be brought into the online classroom.

The US dairy industry contributes significantly to the American economy and accounts for 1% of the US gross domestic product, generating an economic impact of USD 628 billion. The industry also creates nearly 3 million jobs in the US, generating approximately USD 159 billion in wages. According to the USDA milk production report (USDA, 2020), approximately 8.8 million head of dairy cows resided on farms in 24 states in 2020. Assuming feed intake of roughly 60 kg/cow/day, 4% of uneaten feed represents an annual feed waste of 7.73 billion kg/year, which could mean as much as USD 850 million/year in lost income [based on USD 0.11 per kg of total-mixed ration (TMR); Hutjens, 2021]. The loss represents wasted feed direct cost and not losses related to feed disposal, under- and overfeeding nutrients to cows, and the environmental impact.

Providing calculated and correct amounts of feed to dairy cattle is essential to dairy farmers because feed costs represent 40% to 60% of total milk production costs (USDA, 2013). The majority of dairy farms in the US feed cows in a TMR (NAHMS, 2014). A total mixed ration is the mixing of all feed ingredients based on a prescribed amount of each ingredient. Feeding using the TMR method (as opposed to separate ingredient feeding) provides more even rumen fermentation and better use of nutrients (NRC, 2001). Nonetheless, variation in TMR intake causes digestive problems in cows (i.e., acidosis) (NRC, 2001). The variation may be linked to the way farmers feed their animals. Over the past three decades, there has also been remarkable progress in animal production efficiency, driven by advances in genetics, nutrition, infectious disease control, technological innovation, and competitive market pressures. In

addition, in many developed countries, there is growing market pressure for ethically produced food, whether in terms of animal welfare or environmental footprint (e.g., water consumption, greenhouse gas emissions, soil degradation). Dry matter intake (DMI) is the amount of feed a cow consumes per day on a moisture-free basis and is fundamental in nutrition because it sets the number of nutrients available to animals (NRC, 2001). Underfeeding of nutrients restricts production and can affect the health of an animal; overfeeding of nutrients increases feed costs, can result in excessive excretion of nutrients into the environment, and excessively high amounts can be toxic or cause adverse health effects (NRC, 2001; Richardson et al., 2019). Additionally, the inefficient use of feed energy and emissions (greenhouse gases) output associated with raising and maintaining cattle have been targeted as areas of improvement to reduce the impact of dairy farms on the environment (Hagemann et al., 2011; Herrero et al., 2016).

Given the combination of these factors, it is clear that there is a growing global need in agricultural production for a workforce capable of integrating knowledge of animal health and nutrition under conscious environment production systems. However, current evidence suggests a growing shortage of people with the knowledge and problem-solving skills required to match the rapid advances in animal health, science, and food production. This wide-ranging shortage could lead to challenges in some countries' food security and agricultural economic competitiveness.

Professions with high demand for this Certificate include veterinarians, livestock nutritionists, animal scientists and researchers, agricultural educators, dairy production specialists and farm managers.

The Graduate Certificate in Dairy Nutrition for Udder Success is designed for a non-traditional, adult learner audience of prospective students who do not have time or the ability to take coursework on-campus. This coursework will be offered 100% online through a combination of asynchronous (self-paced) and synchronous sessions that allow learners to learn at their own pace, earn academic credit, and complete a graduate certificate. All courses will be taught by existing faculty.

The Graduate Certificate in Dairy Nutrition for Udder Success can be stacked toward the elective requirements for the Animal Sciences, MANSC degree program.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects outside of the sponsoring department impacted by the creation/revision of this program?

Program Regulation and Assessment

Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

List the program's student learning outcomes. Each outcome should identify what students are expected to know and/or be able to do upon completing this program.

As a result of this program, students will be able to:

- Identify most common feedstuffs based on physical appearance and chemical analysis and understand their role in a typical dairy ration.
- Describe the basics of forage growth, harvest, ensilation, and storage connecting these principles to dairy nutrition.
- Compare and contrast common cereal grains and oilseed meals used in dairy rations and understand key factors driving economic value of feedstuffs.
- Describe common feed processing techniques and the nutritional value of resulting byproducts incorporated in dairy rations.
- Formulate diets for dairy cows and young stock
- Use artificial intelligence to improve health and nutrition of dairy animals
- Identify, list, and explain the nutrients in milk and dietary nutrients that can foster improved milk quality in dairy herds
- Reliably demonstrate the ability to formulate a diet for dairy cows and understand its impact on health, fertility, and milk quality

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

The student learning outcomes will be assessed through each course. Frequent formative assessments (e.g., quizzes, discussion forums, live discussions, short-answer essays, and written reflections) will be used to assess student comprehension at the conclusion of each module/objective of each course.

Students will complete summative assessments (e.g., case studies, diet formulations, individual projects, and team projects) at the conclusion of each major course component. Lower-level Bloom's taxonomy assessments will primarily be used to assess learning for the asynchronous course content, while high-level Bloom's taxonomy, high engagement assessments will be used in the synchronous live sessions. Assessments used as part of the synchronous sessions will encourage learners to interact with one another (i.e., Social Learning Theory, Bandura; Zone of Proximal Development, Vygotsky) to solve problems, create potential solutions, and develop strategic plans to solve complex global issues in food and agricultural economics.

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

The goal is for 90% of students enrolled in the certificate to successfully complete (i.e., meet or exceed) the required thresholds of the assessments and earn their Graduate Certificate. The following rating rubric will be used to assess student learning on a fail, meet, or exceed scale.

0-79.9%: Below Expectations

80-89.9%: Meets Expectations

90-100%: Exceeds Expectations

Faculty will provide oversight of individual measures of student outcomes specific to each course and each assessment used within the course. Faculty will consult with college instructional designers to ensure assessments used throughout the course align with intended learning outcomes of the course and the certificate. Each assessment used to measure student learning outcomes will include an evaluation instrument (i.e., rubric).

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

The assessment data from each course will be used internally to assess the overall course, determine necessary adjustments to content or assignments, and modify content/assignments as needed to improve course quality and the student experience.

Program

Description and

Requirements

Attach Documents

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

Program of Study

Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source: <https://www.ibhe.org/assets/files/PublicAdminRules2017.pdf>). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

Attach Program of Study-related information such as sample sequences (for undergraduate programs) or college-level forms. [DAIRY SbS_MANSC.xlsx](#)

Description of program for the catalog page. This is not official content, it is used to help build the new catalog page for the program. Can be edited in the catalog by the college or department.

The Dairy Nutrition for Udder Success Graduate Certificate will provide students with practical knowledge about dairy nutrition and management, and equip them with technical skills needed to optimize the health, nutrition, and milk quality of dairy livestock. Through a unique blend of theoretical knowledge, hands-on training, and cutting-edge technology applications, participants will demonstrate the skills to formulate a feed ration that meets dietary and production needs, use artificial intelligence to optimize animal health, and investigate milk composition and its nutritional impact. Graduates of this certificate will be able to create well-balanced diets that elevate the overall well-being and productivity of dairy herds.

Statement for

Programs of
Study Catalog

Graduation Requirements

Minimum Cumulative GPA: 2.75

Minimum hours required for certificate completion: 12 hours

Students who have successfully completed this certificate may use the certificate courses to satisfy the following degree requirements, provided they apply and are admitted to the degree program:

12 hours of elective course requirements of the Animal Sciences, MANSC degree

The required courses for this certificate are listed below.

Course List

Code	Title	Hours
ANSC 500	Feeds in Dairy Nutrition and Diet Formulation	4
ANSC 501	Nutritional Impact on Cow Health and Disorders	4
ANSC 502	What is Milk and Milk Quality	4
Total Hours		12

Corresponding
Degree

CERT Campus Graduate Certificate

Program Features

Academic Level Graduate

Does this major
have transcripted
concentrations? No

What is the typical time to completion of this program?
1 year

What are the minimum Total Credit Hours required for this program?
12

What is the
required GPA? 2.75

CIP Code 010904 - Animal Nutrition.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Delivery Method

This program is available:

Online Only - The entire program is delivered online, students are not required to come to campus.

Describe the use of this delivery method:

Courses are delivered fully online through the Canvas and Coursera learning management systems. Each course is comprised of two structural components -- an asynchronous component on Coursera and a synchronous component through Canvas.

The asynchronous, self-directed component for each course will include pre-recorded lectures, panel discussions, complimentary readings, demonstration videos, and quizzes. The asynchronous portion provides learners with foundational content for the course.

The second structural component is the high engagement synchronous online session. This session will be offered each week. Students can interact with the instructor(s) and with one another to complete (high-level Bloom's taxonomy) in-depth projects and interactive exercises that build upon the foundational knowledge they previously learned through the asynchronous portion of the course.

Admission Requirements

Desired Effective Admissions Term Fall 2024

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

Prospective students must apply for admission to the Campus Graduate Certificate specifically through the Graduate College admissions process. Graduate and professional admissions minimum requirements will apply: <https://grad.illinois.edu/admissions/apply/requirements>

Number of Students in Program (estimate)

Year One Estimate	20	5th Year Estimate (or when fully implemented)	70
-------------------	----	---	----

Estimated Annual Number of Degrees Awarded

Year One Estimate	10	5th Year Estimate (or when fully implemented)	55
-------------------	----	---	----

What is the matriculation term for this program?

Fall

Budget

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

Attach File(s)

Financial Resources

How does the unit intend to financially support this proposal?

No additional faculty, advisors, or staffing will be needed for implementation of this program.

Will the unit need to seek campus or other external resources?

No

Attach letters of support

[_ Dairy Nutrition for Udder Success CIM Budget.pdf](#)
[DAIRY SelfSupporting GradCERT .pdf](#)
[SS-program-designation-form-DAIRY-signed.pdf](#)

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

Base + Differential

Is this program requesting self-supporting status?

Yes

IBHE

Degree Program Title and Overview

What is the specific title of the proposed degree program as it would be listed in the IBHE Program Inventory? The name should be what typically is used for similar programs nationally. Provide a short description of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates.

Graduate Certificate in Dairy Nutrition for Udder Success

The Dairy Nutrition for Udder Success Graduate Certificate will provide students with practical knowledge about dairy nutrition and management, and equip them with technical skills needed to optimize the health, nutrition, and milk quality of dairy livestock. Through a unique blend of theoretical knowledge, hands-on training, and cutting-edge technology applications, participants will demonstrate the skills to formulate a feed ration that meets dietary and production needs, use artificial intelligence to optimize animal health, and investigate milk composition and its nutritional impact. Graduates of this certificate will be able to create well-balanced diets that elevate the overall well-being and productivity of dairy herds.

Professions with high demand for this Certificate include veterinarians, livestock nutritionists, animal scientists and researchers, agricultural educators, dairy production specialists and farm managers.

The Graduate Certificate in Dairy Nutrition for Udder Success is designed for learners who do not have time or the ability to take coursework on-campus. This coursework will be offered 100% online through a combination of asynchronous (self-paced) and synchronous sessions that allow students to learn at their own pace, earn academic credit, and complete a graduate certificate.

Students can stack the Certificate in Dairy Nutrition for Udder Success toward the elective requirements for the Animal Sciences, MANSC degree program.

Illinois Administrative Code: 1050.30(a)(1): A) The objectives of the unit of instruction, research or public service are consistent with the mission of the college or university; B) The objectives of the unit of instruction, research or public service are consistent with what the unit title implies.

Institutional Context

University of Illinois at Urbana-Champaign

Describe the historical and university context of the program's development. Include a short summary of any existing program(s) upon which this program will be built.

Explain the nature and degree of overlap with existing programs and, if such overlap exists, document consultation with the impacted program's home department(s).

The University of Illinois recently approved Campus Graduate Certificates to reach a new population of learners.

This will be the first transcriptable Graduate Certificate offered by the Department of Animal Sciences. This proposal is aligned with the priorities of the College of ACES to expand our portfolio of online education programs to new audiences of learners who are interested in up-skilling or re-skilling to earn credentials. The courses that comprise this certificate may be stacked as electives for the Animal Sciences, MANSC degree.

Briefly describe how this program will support the University's mission, focus and/or current priorities. Demonstrate the program's consistency with and centrality to that mission.

This certificate program responds directly to Campus Strategic Plan Goal 2C: "Provide new educational pathways and enhance current programs to increase flexibility and to foster education across disciplines."

The Dairy Nutrition for Udder Success Graduate Certificate will expand access to University of Illinois credentials. The impact is threefold:

1. new market of students gain flexibility in obtaining a standalone credential;
2. current students across campus to gain a complimentary credential; and
3. provide a new pathway to degree programs.

Discuss projected future employment and/or additional educational opportunities for graduates of this program. Compare estimated demand with the estimated supply of graduates from this program and existing similar programs in the state. Where appropriate, provide documentation by citing data from such sources as employer surveys, current labor market analyses, and future workforce projections. (Whenever possible, use state and national labor data, such as that from the Illinois Department of Employment Security at <http://lmi.ides.state.il.us/> and/or the U.S. Bureau for Labor Statistics at <http://www.bls.gov/>).

Given the non-degree, graduate level format of this content as well as the working professional target audience, the expectation is that most learners will be seeking career advancement opportunities and/or new career paths in some capacity. Certificate would offer students various learning experiences that will give them more background knowledge that will help with their research and make them marketable for jobs in animal agriculture. The proposed Certificate will also provide insight into their research's impact on the dairy industry and animal agriculture.

Research indicates that the top reason learners choose a graduate certificate is a quick return on their investment that will potentially yield opportunities for salary increases, an expanded professional network, and basic preparation for a future graduate degree program. Furthermore, job seekers of the Great Resignation indicate a desire to increase their professional network while also obtaining skills, academic coursework, and value-added credentials that are transferable to other careers (Fox, M., 2022).

This Graduate Certificate will provide benefits to the learners that it services and to the State of Illinois at large. The employees, the Illinois workforce, and employers will benefit from the upscaling of the workforce. This Graduate Certificate can also attract learners who will later return to the University for a graduate degree program.

What resources will be provided to assist students with job placement?

ACES career services and academic advisors in the Department of ANSC and College of ACES will provide resources to students as needed. Due to the nature of the certificate program and intended target audience, we expect most students will be currently employed working professions who are seeking additional credentialing for their chosen career paths.

If letters of support are available attach

them here:

Comparable Programs in Illinois

Illinois Administrative Code: 1050.30(a)(6): B) The unit of instruction, research or public service meets a need that is not currently met by existing institutions and units of instruction, research or public service. For additional information about similar programs, check the Degree Program Inventory on the IBHE website (https://www.ibhe.org/ProgInv_Prog.aspx) and review the Notice of Intent website for programs being planned (<http://legacy.ibhe.org/ODA/tracking/NOI/NOISearch.asp>).

Identify similar programs and sponsoring institutions in the state, at both public and private colleges and universities. Compare the proposed program with these programs, and discuss its potential impact upon them. Provide complete responses, do not reference website links.

To the best of our knowledge, there are currently no available Certificates and groups of online classes focused on dairy cattle nutrition and health for improved milk quality.

Comparable
Programs in
Illinois Attach
Documents

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

IBHE is charged to develop a strategic plan to address the present and future aims and needs and requirements of higher education in Illinois (110 ILCS 205/6) (from Ch. 144, par. 186) Sec. 6). Illinois Administrative Code:

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically justified based on the educational priorities and needs of the citizens of Illinois Respond to the following questions about how the proposed program will support the three goals of A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth Strategic Plan.

Equity

Describe institutional-level plans to close equity gaps in access, progression, completion, and attainment and the implications for the proposed program. More specifically, provide institutional-level plans for attracting, recruiting, retaining, and completing a diverse group of students including working adults, students of color, transfer and low-income students and implications for the proposed program. Explain how progress will be monitored.

The College of ACES recognizes the need to attract, recruit, retain, and complete a diverse group of students for this certificate program. The intent of this certificate program is to provide accessible, affordable fully online education to working adults, students of color, and low-income students. To that end, we provide flexible learning options as part of this program, targeted outreach and support services to students of color. We also ensure cultural awareness and diversity throughout our instructional content and marketing materials. Our support services will help students connect with financial assistance through the university and provide them with support services to navigate the registration/enrollment process for courses.

These new courses' content and learning outcomes will be relevant across different dairy production systems (e.g., intensive feeding compared to grazing) and are expected to draw a diverse audience of participants. If successful, it is hoped that, in the future, this course will be translated into other languages (e.g., Spanish, Chinese) and thereby reach an even broader population.

Describe program and institution-based high-impact practices and wrap-around student support services ensuring equitable access and success for students enrolled in the proposed program.

College and departmental support services will be provided to students in this certificate program. Specifically, support will be provided for students to:

1. Connect with their learning community of fellow students who are enrolled in associated coursework and the certificate program;
2. Assist with answering questions related to admissions, enrollment, and registration; and
3. Provide them with resources/links to navigate questions related to tuition and student services.
4. Offer adult learning strategies and support resources/links to contribute to student success

Explain institutional strategies being implemented to increase and retain faculty, staff, and administrators of color and the implications for the proposed program. Explain how progress will be monitored.

The College of ACES has an active job search for a new Associate Dean for Diversity, Equity, and Inclusion. As part of this new appointment, intentional strategies will be implemented to increase and retain faculty, staff, and administrators who represent diverse populations. Specific to this certificate program, we strive to recruit diverse faculty and instructors to ensure a sense of belonging and representation for all prospective students. We will also recruit faculty, staff and administrators to serve as lead instructors, subject matter experts, and student support for this certificate.

Sustainability

Describe strategies and initiatives the institution plans to implement that makes the proposed program and college more generally affordable for students and their families, including those who have been historically underserved.

This graduate certificate is designed for adult learners (working professionals). Our desire is to create an affordable, accessible, flexible online educational certificate. The content is focused on knowledge and skill development in targeted areas of interest. Graduate certificates are more affordable with less time commitment for learners as compared to a master's degree. This certificate is in alignment with current workforce demands.

ACES Online Programs have dedicated staff to support students from underrepresented and first gen populations to help foster a sense of belonging and community. Staff also provide technical support in navigating the admissions/enrollment processes.

Provide tuition cost analysis for comparable programs and institutions in Illinois.

This proposed certificate will have self-supporting status at the Base + Differential rate of \$740 per credit hour. This rate is consistent with the other the other Graduate Certificate tuition rates in ACES. Students will be eligible to apply for financial aid through the university. Furthermore, the College of ACES is in the process of hiring a Coordinator of Educational Programs and Partnerships who will seek out corporate agreements with external stakeholders to help fund individual student's access to this certificate.

Growth

Provide a supply and demand analysis for the proposed program that, at minimum, does the following: a) Provides evidence of student interest in the proposed program including any strategies to incentivize students to stay in Illinois. b) Identifies and provides evidence of a high-quality credential with viability for future careers.

With an intended audience of adult learners (professionals in the workforce), this certificate aims to address address the growing demand of livestock nutritionists, veterinarians, animal scientists and researchers, agricultural educators, dairy production specialists and farm managers to understand the newest technologies and concepts in the dairy industry. Graduates will be well-equipped to problem-solve emerging issues in dairy nutrition, feed formulation, animal health and fertility, milk quality and dietary nutrients, and milk quality regulations.

The program's curriculum is designed to align with industry standards and emerging trends. Faculty expertise, guest lectures from industry professionals, and practical case studies ensure that students receive a high-quality education. This education translates to a credential that not only meets the needs of current job markets but also equips graduates with skills that will remain relevant as the dairy livestock industry and milk quality standards and regulations continue to evolve.

Explain how the program engaged with business and industry in its development and how it will spur the state's economy by leveraging partnerships with local, regional, and state industry, business leaders and employers.

As evident in the content of the course, faculty interact with professionals (during pre-recorded lectures and during synchronous online sessions) to provide firsthand knowledge from dairy industry leaders. These professionals offer a 'state of the industry' perspective from the vantage point of the workforce. This connected educational experience helps ensure the graduate program aligns with industry standards and seeks to solve real-world problems the students are experiencing in their professional lives.

Describe how the proposed program will expand access and opportunities for students through high-impact practices including research opportunities, internships, apprenticeships, career pathways, and other field experiences.

The knowledge and skills provided through this certificate, in addition to the credential of a Graduate Certificate, can be used by students to apply for promotions or pivot to new careers. Furthermore, they will expand their professional networks with other students in the course, and connect with industry experts through synchronous online sessions.

This certificate program is part of a larger effort from the College of ACES to expand its educational portfolio of online, flexible learning opportunities. As a result, ACES is continuing to strive toward the land-grant mission of education for all by providing online, flexible, affordable learning options for a global audience of learners.

Explain how the proposed program will expand its models of teaching and learning, research, and/or public service and outreach that provide opportunity for students to succeed in the work of the future.

To meet the diverse learning needs of students, this certificate will offer a combination of asynchronous online and synchronous online learning models. This approach allows students to access course materials at their own convenience, promotes flexibility, and allows students to personalize their learning experience. Students may earn a Graduate Certificate from the College of ACES that can be stacked toward the elective requirements of the Animal Sciences, MANSC degree.

Beyond workforce need, describe how the program broadly addresses societal needs (e.g., cultural or liberal arts contribution, lifelong learning of Illinois residents, or civic participation).

Beyond addressing technical and scientific workforce needs specific to the content offered in this certificate, the Dairy Nutrition for Udder Success certificate will promote cultural and societal enrichment toward a broader understanding of the agricultural sector and the production livestock industry. Graduates of this certificate program will help cultivate a science-informed society by dispelling misconceptions about agriculture, animal husbandry, and nutrition, thereby fostering a culture of evidence-based decision-making. Furthermore, graduates will be equipped to implement innovative techniques that reduce the environmental footprint of dairy operations, promoting ecologically responsible farming practices. This aligns with the increasing emphasis on sustainable agriculture and helps address broader concerns related to climate change and resource scarcity.

A Thriving Illinois:
Higher Education
Paths to Equity,
Sustainability, and
Growth - Attach
Documents

Program Description and Requirements

Illinois Administrative Code:

1050.30(b)(1) A) The caliber and content to the curriculum assure that the objectives of the unit of instruction will be achieved; B) The breadth and depth of the curriculum are consistent with what the title of the unit of instruction implies; C) The admission and graduation requirements for the unit of instruction are consistent with the stated objectives of the unit of instruction.

1050.30(b)(3): Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

1050.50 (a)(2)(C) Requirement for Programs in which State Licensure is Required for Employment in the Field: In the case of a program in which State licensure is required for employment in the field, a program can be found to be in good standing if the institution is able to provide evidence that program graduates are eligible to take the appropriate licensure examination and pass rates are maintained as specified in the objectives of the unit of instruction. If there is no such evidence, the institution shall report the program as flagged for review.

Program Description

Provide a description of the proposed program and its curriculum, including a list of the required core courses and short ("catalog") descriptions of each one. (This list should identify all courses newly developed for the program).

Provide Program Description here:

The Dairy Nutrition for Udder Success Graduate Certificate will provide students with practical knowledge about dairy nutrition and management, and equip them with technical skills needed to optimize the health, nutrition, and milk quality of dairy livestock. Through a unique blend of theoretical knowledge, hands-on training, and cutting-edge technology applications, participants will demonstrate the skills to formulate a feed ration that meets dietary and production needs, use artificial intelligence to optimize animal health, and investigate milk composition and its nutritional impact. Graduates of this certificate will be able to create well-balanced diets that elevate the overall well-being and productivity of dairy herds.

The uniqueness of this certificate lies in its combination of asynchronous, self-paced content in addition to the synchronous, high engagement live sessions where learners can engage in problem-solving and discussion with other students in the learning community. Adult learners enrolled in this certificate will be encouraged to share their real-world experiences and apply new knowledge and skills gained from the coursework toward their professional endeavors.

This is a fully online certificate program that includes asynchronous and high-impact, high-engagement synchronous components.

The certificate includes three required courses that equate to 12 credit hours.

The three new courses that will be developed for this certificate program.

The three new courses are:

ANSC 500: Feeds in Dairy Nutrition and Diet Formulation (4 credit hours)

Students will examine the fundamentals of dairy cattle nutrition, identify common feedstuffs, and describe the basics of forage growth, harvest, insulation, and storage. Energy, carbohydrates, lipids, protein, amino acids, additives, forages, young stock, and transition cow feeding will be discussed. Students will explore common feed processing techniques, formulate diets for young and mature (lactating and non-lactating) dairy animals, and investigate the newest research insights for on-farm applications and evolving trends in dairy feeds and nutrition.

ANSC 501: Nutrition Impact on Cow Health and Diseases (4 credit hours)

Explore the holistic impact of nutrition on dairy cattle health and metabolic disorder, and analyze nutrition's role in alleviating stressors. Instructors will discuss profound effects of nutrition on production, physiology, and the immune system. The course includes self-paced learning, case studies, practical insights on dairy nutrition, application of artificial intelligence (e.g., machine learning) for predicting feed intake, and collaborative discussions to address complex issues. Students can also bring and work on their own datasets.

ANSC 502: What is Milk and Milk Quality (4 credit hours)

Explore the composition and synthesis of milk, maternal adaptations supporting milk production, and the impact of cow's milk on human nutrition. Students will examine

the digestion of dairy products, health disorders (e.g., lactose intolerance), and milk quality. The course includes self-paced learning, current research, on-farm applications, and interactive discussions. Instructors and guest experts will present case studies, share hands-on experience in milk quality and economics, and discuss the economic relevance of milk quality.

Attach Program
Description Files if
needed

Graduation Requirements

Provide a brief narrative description of all graduation requirements, including, but not limited to, credit hour requirements, and, where relevant, requirements for internship, practicum, or clinical. For a graduate program, summarize information about the requirements for completion of the thesis or dissertation, including the thesis committees, and the final defense of the thesis or dissertation. If a thesis or dissertation is not required in a graduate program, explain how the functional equivalent is achieved.

To earn a Certificate in Dairy Nutrition for Udder Success, students must complete three required courses (12 credit hours) with a 2.75 GPA or higher. Due to the nature of the certificate program, no thesis, dissertation, internship, or practicum is required.

Specialized Program Accreditation

Describe the institution's plan for seeking specialized accreditation for this program. Indicate if there is no specialized accreditation for this program or if it is not applicable.

NA

Licensure or Certification for Graduates of the Program

If this program prepares graduates for entry into a career or profession that is regulated by the State of Illinois, describe how it is aligned with or meets licensure, certification, and/or entitlement requirements.

NA

Plan to Evaluate and Improve the Program

Describe the program's evaluation plan.

The ACES Online Program administration will use key performance indicators to evaluate the certificate program. The key performance indicators that will be used to measure and evaluate viability and success of the Graduate Certificate are:

- number of applications received
- number of students enrolled
- retention rate percentage (within each course and online degree)
- learner experience rating (Likert-scale will be used to assess learner experience with the application, admissions, and enrollment processes, in addition to communication, course quality, live and asynchronous courses/sessions, access to faculty/instructors, and technical support)
- ICES course evaluations
- ACES Online Programs course evaluations (Likert scale used to rate each major component of the course, including asynchronous and synchronous components and assessments)
- time to certificate completion

The data collected will be evaluated by the teaching and learning team at the conclusion of each iteration of the course. Revisions will be made prior to the next course offering.

Plan to Evaluate
and Improve the
Program
Attachments

Budget Narrative

Fiscal and Personnel Resources

Illinois Administrative Code: 1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained; B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

Budget Rationale

Provide financial data that document the university's capacity to implement and sustain the proposed program and describe the program's sources of funding.

Is the unit's (Department, College, School) current budget adequate to support the program when fully implemented? If new resources are to be provided to the unit to support the program, what will be the source(s) of these funds? Is the program requesting new state funds? (During recent years, no new funds have been available from the state (IBHE) to support new degree programs).

The initial development of this certificate is funded by the College of ACES and the FY23 Investment for Growth Program from the Office of the Provost. Through college and campus support, the college developed a grant program wherein faculty teams applied to receive funding to develop new online courses that comprised a new online Graduate Certificate. The revenue generated from the courses will be re-invested into the certificate program, faculty, content revision, and student support services.

Faculty Resources

Will current faculty be adequate to provide instruction for the new program or will additional faculty need to be hired? If additional hires will be made, please elaborate.

Current faculty, instructors, and program directors will provide instruction.

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

The courses that comprise this certificate program are part of the current faculty teaching loads. No additional support is needed at this time. Should demand for the courses exceed expectations and more sessions of the courses need to be offered, one or two new faculty may need to be hired to maintain an appropriate teacher-student ratio.

Describe how the unit will support student advising, including job placement and/or admission to advanced studies. Will current staff be adequate to implement and maintain the new program or will additional staff be hired? Will current advising staff be adequate to provide student support and advisement, including job placement and or admission to advanced studies? If additional hires will be made, please elaborate.

Current administration in ACES Online Programs will provide student support in admissions and enrollment services.

Are the unit's current facilities adequate to support the program when fully implemented? Will there need to be facility renovation or new construction to house the program?

Yes, the current facilities are adequate to support the program. Faculty have the necessary computer and video/audio equipment available to provide a high quality online learning experience. Additionally, faculty have full access to use the ACES Media Studio, equipped with the latest technology, to host their live synchronous online sessions and record asynchronous content. Faculty also have full access to the suite of CITL media studios to record video content and create materials for the course.

The courses that comprise this certificate will be offered 100% online. No classroom space is needed.

Physical address locations for the above mentioned facilities include:

ACES Media Studio is located in Room 028, ACES Library, Information and Alumni Center, 1101 South Goodwin Avenue, Urbana, IL 61801

CITL Studios are located in Room 069, Literatures, Cultures, and Linguistics Building, 707 S. Mathews Ave., Urbana, IL 61801

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

The courses for this program will be 100% online. Library collections, resources, and services are adequate to meet needs.

Summarize information about library resources for the program, including a list of key textbooks, a list of key text and electronic journals that will support this program, and a short summary of general library resources of the University that will be used by the program's faculty, students, and staff.

Electronic journals will be used for required readings for the courses. Required readings may come from a variety of peer-reviewed, academic journals, including but not limited to the Journal of Dairy Science, Veterinary Parasitology, Bioinformatics and Biology Insights, Tropical Animal Health Production, Computers and Electronics in Agriculture, and the American Journal of Veterinary Research. Discovery and access for the electronic journals and journal articles will be provided through the University Library's online catalog and subscription databases. Open source, peer-reviewed journal articles will also be included as readings in the course. No textbooks will be used for this course.

Are any sources of funding temporary (e.g., grant funding)? If so, how will the program be sustained once these funds are exhausted?

Library resources and services will be provided using existing state-funded collection allocations. No temporary funding will be needed for these resources and services.

If this is a graduate program, please discuss the intended use of graduate tuition waivers. If the program is dependent on the availability of waivers, how will the unit compensate for lost tuition revenue?

The program is self-supporting. No graduate tuition waivers will be used for the courses associated with this program.

Budget Narrative

Fiscal and

Personnel

Resources

Attachments

Personnel Budget

Please complete all lines below; all fields are required. For fields where there is no anticipated cost or need, enter 0 or NA.

Category	Year One	Year Five	Notes
----------	----------	-----------	-------

Faculty (FTE)

Faculty FTE Year1	Faculty FTE Year 5	Faculty FTE Notes
0	0	existing faculty resources will be employed, no new resource allocation required

Faculty (\$)

Faculty Year 1	Faculty Year 5	Faculty Notes
0	0	existing faculty resources will be employed, no new resource allocation required

Advising Staff (\$)

Advising Staff Year 1	Advising Staff Year 5	Advising Staff Notes
0	0	existing staff resources will be employed, no new resource allocation required

Graduate

Students (\$)

Graduate Students Year 1	Graduate Students Year 5	Graduate Students Notes
0	0	NA

Other Personnel

Costs

Other Personnel Costs Year 1	Other Personnel Costs Year 5	Other Personnel Costs Notes
0	0	NA

Budget Narrative

Attachments

Facilities and Equipment

Illinois Administrative Code: 1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support high quality academic work in the unit of instruction, research or public service are available and maintained;

B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service;

C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Describe the facilities and equipment that are available, or that will be available, to develop and maintain high quality in this program. Summarize information about buildings, classrooms, office space, laboratories and equipment, and other instructional technologies for the program.

The faculty and instructional designers who are developing content for this certificate have full access to services provided by two instructional media producers from CITL (embedded in ACES), three CITL video/media studios, one newly renovated ACES Media Studio, two ACES instructional designers, and CITL digital media and graphic design specialists.

Physical address locations for the above mentioned facilities include:

ACES Media Studio is located in Room 028, ACES Library, Information and Alumni Center, 1101 South Goodwin Avenue, Urbana, IL 61801

CITL Studios are located in Room 069, Literatures, Cultures, and Linguistics Building, 707 S. Mathews Ave., Urbana, IL 61801

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Will the program need additional technology beyond what is currently available for the unit?

No

Are there other costs associated with implementing the program?

No

Facilities and
Equipment
Attachments

Faculty and Staff

Illinois Administrative Code: 1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met; B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities; C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

Describe the personnel resources available to develop and maintain a high quality program, including faculty (full- and part-time, current and new), staff (full- and part-time, current and new), and the administrative structure that will be in place to oversee the program. Also include a description of faculty qualifications, the faculty evaluation and reward structure, and student support services that will be provided by faculty and staff.

Faculty and staff who will support this program include:

PARTICIPATING FACULTY -- INSTRUCTIONAL TEAM

Instructional Team Leader: Phil Cardoso(1), Ph.D, associate professor, full-time faculty.
Instructional Team: Isabella C. F. S. Condotta (1,2,3), Ph.D., assistant professor; full-time faculty; James K. Drackley (1), Ph.D., professor, full-time faculty; Brian M. Aldridge (2,4), DVM, clinical professor, full-time faculty; Juan Loor (1,5), Ph.D., professor, full-time faculty; Joshua C. McCann (1), Ph.D., assistant professor, full-time faculty; and Derek Nolan (1), Ph.D., teaching assistant professor, full-time faculty.

(1) College of ACES, Department of Animal Sciences, University of Illinois.

(2) Center for Digital Agriculture (CDA) and the Artificial Intelligence for Future Agricultural Resilience, Management, and Sustainability Institute (AIFARMS), University of Illinois.

(3) National Center for Supercomputing Applications (NCSA), University of Illinois.

(4) College of Veterinary Medicine, Department of Veterinary Clinical Medicine, University of Illinois.

(5) Division of Nutritional Sciences (DNS), University of Illinois.

COLLEGE FACULTY & STAFF -- INSTRUCTIONAL DESIGN SUPPORT

- Dr. Anna Ball, associate dean of academic programs, ACES, full-time faculty and staff
- Dr. Debra Korte, assistant dean for learning innovation, ACES (oversee student support services and ACES Online staff), full-time faculty

Drs. Ball and Korte will provide oversight of the certificate and the ACES Online Staff who are supporting the development of the certificate. Drs. Ball and Korte each have doctoral degrees in agricultural education and served as teacher educators and curriculum experts in their respective higher education appointments and land- grant universities.

- Kasey Murphy, instructional designer, ACES, full-time staff

- Jennifer Banda, visiting teaching and learning specialist, ACES, full-time staff
Kasey Murphy and Jennifer Banda are former educators (secondary and post-secondary education) and hold degrees in education and curriculum design.

- Kevin Southworth, instructional media producer, CITL (embedded in ACES), full-time staff

- Adam Ruud, instructional media producer, CITL (embedded in ACES), full-time staff
Adam Ruud and Kevin Southworth each have more than 14 years of experience in media development.

- Dr. Elissa Thomann Mitchell, online education consultant, ACES, part-time faculty
Dr. Thomann Mitchell is a Teaching Associate Professor in Human Development and

Family Studies. She is a certified online course evaluator for Quality Matters and is an accomplished author of several peer-reviewed publications on the scholarship of teaching and learning in online and hybrid modalities of instruction.

Summarize the major accomplishments of each key faculty member, including research/scholarship, publications, grant awards, honors and awards, etc. Include an abbreviated curriculum vitae or a short description.

Please see attached CVs of key faculty involved in this initiative.

Faculty and Staff Attachments [DAIRY_CVs_Faculty.pdf](#)

HLC Section

Credit Hours

Existing or repackaged curricula (Courses from existing inventory of courses):	Number of Credit Hours: 0	0 Percent of Total:
Revised or redesigned curricula (Courses for which content has been revised for the new program):	Number of Credit Hours: 0	0 Percent of Total:
New curricula (Courses developed for the new program that have never been offered):	Number of Credit Hours: 100	12 Percent of Total:
Total Credit Hours of the Program: 100	Number of Credit Hours:	12 Percent of Total:

New Faculty Required

Will new faculty expertise or new faculty members be needed to launch this program?

No

Please explain existing coverage:

No new faculty are needed to launch this program.

Additional Funds

Will the proposed program require a large outlay of additional funds by the institution?

No

Institutional Funding

Please explain institutional funding for proposed program:

The funding provided for the development of this certificate is part of a grant developed from the FY23 Investment for Growth initiative and funding support provided by the College of ACES. Each instructional team is provided funding over 3 years to design, develop, and implement the courses for the certificate program. The funding generated from the courses will be reinvested in the program to sustain this certificate.

EP Documentation

EP Control Number EP.24.065

Attach Rollback/Approval Notices

This proposal requires HLC inquiry No

DMI Documentation

Attach Final Approval Notices

Banner/Codebook Name

Program Code:

Minor Code	Conc Code	Degree Code	Major Code
------------	-----------	-------------	------------

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

HLC Approval Date

DOE Approval Date

Effective Date:

Attached
Document
Justification for
this request

Program Reviewer
Comments

Brooke Newell (bsnewell) (08/30/23 11:34 am): Rollback: Email sent to Debra, Brianna, Holly

Brooke Newell (bsnewell) (08/30/23 1:04 pm): Rollback: Per request from Debra

Brooke Newell (bsnewell) (09/01/23 9:49 am): Rollback: Proposal Title, Related proposals revision requested. Email sent to Debra, Brianna, and Holly.

Rodney W. Johnson (rwjohn) (09/12/23 12:56 pm): Rollback: Revise as appropriate. Thanks.

Anna Dilger (adilger2) (09/12/23 3:05 pm): Rollback: Sent back to Debra per her request

Key: 1219

BUDGET

The ACES Online Learning Innovation RFP Budget and Justification template (Excel file) is below. We believe our proposal has a high funding priority since it has the collaboration with 2 or more faculty in his/her/their academic unit, among multiple academic units in the College of ACES; collaboration with faculty from other Colleges on campus and/or research partner organizations; dual-purpose asynchronous components; unique, innovative video and audio content with “in the field” demonstrations and/or documentary-style content; and flexible attendance policies wherein students can attend a live synchronous session or watch recordings of the live session. (Excel file available per request)

ACES Online Learning Innovation RFP Budget Template						
Dairy Nutrition for Udder Success						
		<u>Year/Course 1</u>	<u>Year/Course 2</u>	<u>Year/Course 3</u>	<u>Total</u>	
A. Personnel: Instructional Team						
Cardoso_Instructional Team Leader	Salary	\$ 11,501	\$ 6,251	\$ 9,376	\$	27,128
Drackley_Instructional Team 2	Salary	\$ 8,418	\$ -	\$ 8,418	\$	16,835
McCann_Instructional Team 3	Salary	\$ 5,005	\$ -	\$ -	\$	5,005
Condotta_Instructional Team 4	Salary	\$ -	\$ 4,842	\$ -	\$	4,842
Loor_Instructional Team 5	Salary	\$ -	\$ 7,045	\$ -	\$	7,045
Aldrich_Instructional Team 6	Salary	\$ -	\$ 6,000	\$ -	\$	6,000
Other FTE Personnel	Salary	\$ -	\$ -	\$ -	\$	-
Personnel Total		\$ 24,923	\$ 24,137	\$ 17,794	\$	66,854
B. Other Personnel						
Nolan_Adjunct Instructor	Salary	\$ -	\$ -	\$ 3,365	\$	3,365
Adjunct Instructor	Salary	\$ -	\$ -	\$ -	\$	-
Graduate Assistant(s)	Salary	\$ 24,000	\$ 25,000	\$ 26,000	\$	75,000
Graduate Assistant(s)	Salary	\$ -	\$ -	\$ -	\$	-
Student Hourly	Salary	\$ -	\$ -	\$ 1,500	\$	1,500
Student Hourly	Salary	\$ -	\$ -	\$ -	\$	-
Admin. Salary	Salary	\$ -	\$ -	\$ -	\$	-
Other	Salary	\$ -	\$ -	\$ -	\$	-
Other Personnel Total		\$ 24,000	\$ 25,000	\$ 30,865	\$	79,865
All Personnel Total		\$ 48,923	\$ 49,137	\$ 48,659	\$	146,719
C. Marketing		\$ 1,000	\$ 800	\$ 1,300	\$	3,100
D. Other Direct Costs		\$ -	\$ -	\$ -	\$	-
Total Other Direct Costs		\$ 1,000	\$ 800	\$ 1,300	\$	3,100
F. Total Direct Costs		\$ 49,923	\$ 49,937	\$ 49,959	\$	149,819

Budget Justification

A. Personnel: Instructional Team

1. Dr. Cardoso, Instructional Team Leader, will oversee and guide the entire project and ensure that the courses are coordinated, and the state objectives are met promptly. He will be involved in developing the proposed three courses and be the conduit between the marketing staff and the instructional team. Funds are requested for 0.90 months of summer salary in year 1, 0.50 months of summer salary in year 2, and 0.75 months of summer salary in year 3. (\$27,128).
2. Dr. Drackley, Instructional Team member, will partly proctor Course 1 (module 2) and develop Course 3 (module 1). Funds are requested for 0.50 months of summer salary in years 1 and 3. (\$16,835).

3. Dr. McCann, Instructional Team member, will proctor and develop Course 1 (module 1). Funds are requested for 0.50 months of summer salary in year 1. (\$5,005).
4. Dr. Condotta, Instructional Team member, will partly proctor and develop Course 2 (module 1). Funds are requested for 0.50 months of summer salary in year 2. (\$4,842).
5. Dr. Loor, Instructional Team member, will partly proctor and develop Course 2 (module 2). Funds are requested for 0.50 months of summer salary in year 2. (\$7,045).
6. Dr. Aldrich, Instructional Team member, will partly proctor and develop Course 2 (module 2). Funds are requested for 0.50 months of summer salary in year 2. (\$6,000).

B. Other Personnel

1. Dr. Nolan, Instructional Team member, will proctor and develop Course 3 (module 2). Funds are requested for 0.50 months of summer salary in year 3. (\$3,365). The Department had approved his service in excess.
2. Graduate Assistant: 1 X 50% FTE Ph.D. graduate student is requested across all three years. Dr. Cardoso and Dr. Nolan will co-advise a student. (\$75,000).
3. Undergrad Hourly: Funds are requested for undergraduate hourly support at approximately \$13 per hour for a total of 8 hours per week. The undergraduate hourlies will support Dr. Cardoso and Dr. Nolan. (\$1,500)

C. Marketing

We request funding for years 1, 2, and 3 to develop the activities below under the guidance of ACES staff. (\$3,100).

1. We would like to consult with ACES marketing to understand the best way to reach out to nutritional and animal health companies in the dairy space to offer the proposed courses as a form of training and standardization of concepts for their employees globally.
2. We plan, in consultation with ACES, to have the Certificate publicized in popular dairy magazines, podcasts, professional associations, and other vehicles that ACES staff may judge appropriate.
3. We will be recording content and/or hands-on demonstrations at the Feed Technology Center, on the U of I Dairy Research Farm, and at a commercial dairy facility to bring the learning experience to life.
4. Develop a logo for the Dairy Nutrition for Udder Success Online Certificate.

D. Other Direct Costs

Not applicable.

(References provided upon request)

Current

Animal Sciences, MANSC

for the Master of Animal Sciences in Animal Sciences (on campus & online)

Course List

Code	Title	Hours
Required:		
ANSC 590	Animal Sciences Seminar	2
or ANSC 591	Grad Bioinformatics Seminar	
ANSC 593	Res Studies in Animal Sciences	8
The individual research studies project or internship experience and a written report will fulfill the ANSC 593 (Research Studies in Animal Sciences) capstone project requirement. The project or internship and the written product will be supervised by the Animal Sciences faculty mentor and provide evidence that the student can understand and apply the scientific method, interpret scientific information; and effectively communicate scientific information in a field of animal sciences.		
Select One Statistics Course:		2-4
ANSC 440	Applied Statistical Methods I	
ANSC 445	Statistical Methods	
ANSC 448	Math Modeling in Life Sciences	
ANSC 449	Biological Modeling	
ANSC 442	Introduction to Data Analytics	
Elective Courses: Please consult with advisor		18-20
Elective 400- or 500-level courses	Chosen in consultation with the advisor (excludes ANSC 590 , ANSC 591 , ANSC 593)	

Total Minimum Hours 32

Total Hours 32

Other Requirements

Other requirements and conditions may overlap	
Hours Overall Required Within the Unit: 12	
Minimum 500-level Hours Required: 12	12
Minimum GPA: 3.0	

Proposed

Dairy Nutrition for Udder Success

The required courses for this certificate are listed below.

Code	Title	Hours
ANSC 500	Feeds in Dairy Nutrition and Diet Formulation	4
ANSC 501	Nutrition Impact on Cow Health and Diseases	4
ANSC 502	What is Milk and Milk Quality	4

CERT Total 12

November 14, 2023

To Whom it May Concern:

The purpose of this letter is to provide justification for the Illinois Graduate College *Program Tuition Waiver Policy Proposal*. Specifically, the College of ACES and Department of Animal Sciences (ANSC) are requesting **self-supporting** status for the Campus Graduate Certificate in *Dairy Nutrition for Udder Success*.

1a. Describe the **pros and cons** of the classification requested.

- **Pros:** The Certificate in *Dairy Nutrition for Udder Success* responds directly to Campus Strategic Plan Goal 2C: "Provide new educational pathways and enhance current programs to increase flexibility and to foster education across disciplines." This certificate program will address the growing needs to provide high quality, flexible online education to meet learner demands from mid-career, non-traditional audiences; mitigate risk of reliance on state financial support; provide new educational pathways to enhance current programs and increase revenue; and design affordable and accessible programs for students from disadvantaged ethnic, racial, and geographical backgrounds and underrepresented minority populations. Furthermore, this self-supporting status is consistent with the online Companion Animal Nutrition certificate that is currently offered by the department.
- **Cons:** There are no known concerns of this request.

1b. Describe how the requested classification will **benefit and not adversely affect** the academic quality of the program.

The requested self-supporting status will benefit ANSC and the initiatives specifically outlined as part of this new graduate certificate by expanding our reach of learners to a broader audience. This request will also contribute toward the sustainability of this certificate. There are no foreseeable reasons why the self-supporting status would adversely affect the academic quality of the certificate program, other courses and programs in the department, or the M.S. degree programs that coursework from this certificate can be applied toward as elective requirements.

2. What type of financial assistance will be offered to students in the program?

As a Campus Graduate Certificate, this program will be eligible for student financial assistance through the Office of the Registrar at the University of Illinois and the Graduate College.

3. Has this program had past practice of offering graduate assistantships? If so, please describe.

No. This is a new program offered by the ANSC and the College of ACES.

4. What provisions will be made to communicate the new classification to prospective and newly admitted students?

This certificate will be promoted as a standalone certificate and as a certificate that can be stacked toward the Animal Sciences, MANSC degree. The self-supporting status of this certificate will be communicated on all websites, marketing and promotional materials provided by the College of ACES and the Department of Animal Sciences.

Thank you for your consideration of this self-supporting status request for the new Certificate in *Dairy Nutrition for Udder Success*.

Sincerely,



Anna Ball

Associate Dean of Academic Programs



GRADUATE COLLEGE

110 Coble Hall, MC-322
801 S. Wright St.
Champaign, IL 61820

PROGRAM TUITION WAIVER POLICY PROPOSAL

Proposals to establish or revise tuition waiver policy for a graduate program will follow a shared governance approval process (Department, School, College, Graduate College).

Definitions of Tuition Waiver Policy Designations:

Traditional Programs. Programs either designated as generating **full or base-rate** tuition waivers. Base rate waivers waives only the Resident Graduate Base tuition amount. Non-Residents or students in a program with an additional tuition differential will be responsible for the remaining portion of tuition.

Reimbursable Programs. Programs identified as programs that would be reimbursed from an appointing unit outside their academic college.

Cost-recovery and self-supporting programs. Students in approved cost-recovery and self-supporting programs are not eligible to receive tuition and fee waivers except statutory waivers. Students in these programs are not eligible to hold a waiver generating graduate appointment (Assistantship or Fellowship). Full time employees may be admitted to these programs, but their employee waiver is not eligible for use towards a program with this designation.

Additional information related to these tuition waiver designations can be found here:
<http://www.grad.illinois.edu/gradhandbook/2/chapter7/tuition-waivers#otherprovisions>.

PROGRAM INFORMATION

COLLEGE OR SCHOOL: College of Agricultural, Consumer and Environmental Sciences (ACES)

PROGRAM(s) (Include Program Codes if applicable):
Certificate in Dairy Nutrition for Udder Success (CERT)

REQUESTED DESIGNATION (Select desired designation type):

Self-Supporting

Comments:

JUSTIFICATION: On a separate sheet, please address the following.

1. Describe the reasons for this request and explain: (a) the pros and cons of the classification requested, and (b) how the requested classification will benefit and not adversely affect the academic quality of the program.
2. What type of financial assistance will be offered to students in the program?
3. Has this program had past practice of offering graduate assistantships? If so, please describe.
4. What provisions will be made to communicate the new classification to prospective and newly admitted students?

APPROVALS: (May use Adobe Signature or print and sign the document)

Department Executive Officer Signature and Date: Rodney W. Johnson Digitally signed by Rodney W. Johnson
Date: 2023.08.14 14:04:35 -05'00'

Disciplinary College Signature and Date: Germán Bollero Digitally signed by Germán Bollero
Date: 2023.08.09 09:18:00 -05'00'

Graduate College Signature and Date: Allison McKinney Digitally signed by Allison McKinney
Date: 2024.01.05 15:02:05 -06'00'



Felipe (Phil) Cardoso

cardoso2@illinois.edu

Abbreviated Curriculum Vitae

May 2, 2017

Educational Background

D.V.M.	Universidade Federal do Rio Grande do Sul (UFRGS) – Brazil. College of Veterinary Medicine, December 9, 2001.
M.S.	Universidade Federal do Rio Grande do Sul (UFRGS) – Brazil. Major: Surgery and Biochemistry of Ruminants. College of Veterinary Medicine, January 7, 2007.
Ph.D.	University of Illinois, August 6, 2012. Major: Animal Sciences (Ruminant Nutrition).

List of Academic Positions since Final Degree

Assistant Professor, Department of Animal Sciences, University of Illinois, 2012 to present.

Other Professional Employment

SerVet, Inc. – Dairy Cattle Services – Brazil.

Dates: December 10, 2001 to May 14, 2007.

Title: Founder and President.

Location: Passo Fundo, RS – Brazil.

University of Sao Paulo (Escola Superior de Agricultura Luiz de Queiroz – ESALQ) – Brazil.

Dates: May 15, 2007 to January 15, 2009.

Title: Research Associate.

Location: Piracicaba, SP – Brazil.

Honors, Recognitions, and Outstanding Achievements

1. 2010 NMPF – National Dairy Leadership Scholarship.
2. 2010 American Dairy Science Association (ADSA) Award, 3rd place. Land O'Lakes, Purina Feed LLC Graduate Student Poster Contest – Ph.D. Division.
3. 2011 BASF Graduate Travel Award. The Department of Animal Sciences at the University of Illinois recognizes individual with significant research to service the dairy industry.
4. 2012 Gamma Sigma Delta, Honor Society of Agriculture
5. 2012 Graduate College Fellowship Award, University of Illinois.
6. 2012 ASN-ASAS-ADSA Pre-Conference, Regulation of Nutritional Intake and Metabolism Award, 2nd place. Graduate Student Poster Contest – PhD Division.
7. 2016 College Faculty Award for Excellence in Extension, University of Illinois.
8. 2016 ADSA Foundation Scholar Award in Dairy Production.
9. 2017 ADSA/ASAS Midwest Outstanding Young Extension Specialist Award.
10. 2017 NACTA (North American Colleges and Teachers of Agriculture) Educator Award.

Named to the List of Teachers Ranked Excellent by their Students: Fall 2012 (ANSC 100), Spring 2013 (ANSC 100, 398), Fall 2013 (ANSC 100), Spring 2014 (ANSC 100), Fall 2014 (100, 400, 522), Spring 2015 (ANSC 590), Fall 2015 (ANSC 100, 201), Spring 2016 (ANSC 100), and Fall 2016 (ANSC 100, 400).

Offices Held in Professional Societies

1. Secretary, American Dairy Science Association-Midwest section board of directors (*elected*, 2015).
2. President, American Dairy Science Association-Midwest section board of directors (*elected*, 2016-2017).
3. Member of the Journal of Dairy Science Management Committee (*elected*, 2017-2021).

PUBLICATIONS AND CREATIVE WORKS

Denotes any publication derived from the candidate's thesis.

* Denotes publication that has undergone stringent editorial review by peers.

+ Denotes publication that was invited and carries special prestige and recognition.

Δ Denotes publication that was authored by a graduate student advised by Dr. Cardoso

^ Denotes publication where Dr. Cardoso is the corresponding author

Names of student and post-doc authors advised by the candidate are underlined.

Doctoral thesis title

Relationships among nutritional regimen, metabolic disorders, reproduction, and production in dairy cows during the transition period.

Chapters in Books (in print or accepted)

C. C. Kalebich, and **F.C. Cardoso**. (2016) Effects of direct-fed microbials (DFM) on feed intake, milk yield, milk composition, feed conversion, and health condition of dairy cows. Book: Nutrients in Milk and Their Implications on Health and Disease. Ed. Elsevier. *In press*.

Articles in Journals (in print or accepted)

- * 1) Renard, G, J.F. Garcia, **F.C. Cardoso**, M.F. Richter, J.A. Sakanari, L.S. Ozaki, C. Termignoni, A Masuda. (2000). Cloning and functional expression of a *Boophilus microplus* cathepsin L-like enzyme. *Insect Biochemistry and Molecular Biology*. 30:1017-1026.
- * 2) Renard, G., F.A. Lara, **F.C. Cardoso**, M.D. Petretski, C. Termignoni, A. Masuda. (2002). Expression and Immunolocalization of a *Boophilus microplus* cathepsin L-like enzyme. *Insect Molecular Biology*. 11(4):325-328.
- * 3) Da Silva, I.V, S. Imamura, C. Nakajima, **F.C. Cardoso**, C.A.S. Ferreira, G. Renard, A. Masuda, K. Ohashi, M. Onuma. (2005). Molecular cloning and sequence analysis of cDNAs encoding for *Boophilus microplus*, *Haemaphysalis longicornis* and *Rhipicephalus appendiculatus* actins. *Veterinary Parasitology*. 127(2):147-155.
- * 4) Campos, R., F.H.D. González, A. Coldebella, **F.C. Cardoso**. (2006). Ruminal environment indicators and its relationships with milk composition and somatic cell counts during different stages of the beginning of lactation of high producing cows. *Ciência Rural*. 36(2):525-530.
- # * 5) **Cardoso, F.C.**, V.S. Esteves, S.T. Oliveira, C. Lasta, S.F. Valle, R. Campos, F.H.D. González. (2008). Hematological, biochemical and ruminal parameters for diagnosis of left displacement of the abomasum in dairy cows from Southern Brazil. *Pesquisa Agropecuária Brasileira*. 43:141-147.
- * 6) Garcia, A.M.B., **F.C. Cardoso**, R. Campos, D.X. Thedy, F.H.D. Gonzalez. (2011). Metabolic evaluation of dairy cows subjected to different strategies for preventing negative energy balance early postpartum. *Pesquisa Veterinária Brasileira*. 31(1):11-17.
- * 7) **Cardoso, F.C.**, W. Sears, S.J. Leblanc, J.K. Drackley. (2011). Comparison of 3 methods for analyzing areas under the curve for glucose and nonesterified fatty acids concentrations following epinephrine challenge in dairy cows. *Journal of Dairy Science*. 94:6111-6115.

- # * 8) **Cardoso, F.C.**, S.J. Leblanc, M.R. Murphy, J.K. Drackley. (2013). Parturition nutritional strategy affects reproductive performance in dairy cows. *Journal of Dairy Science*. 96:5859-5871.
- * 9) Akbar, H., **F.C. Cardoso**, S. Meier, C. Burke, S. McDougall, M. Mitchell, C. Walker, S. L. Rodriguez-Zas, R.E. Everts, H.A. Lewin, J.R. Roche, J.J. Looor. (2014). Postpartal Subclinical Endometritis Alters Transcriptome Profiles in Liver and Adipose Tissue of Dairy Cows. *Bioinformatics and Biology Insights*. 8:45-63.
- * 10) Khan, M.J., C.B. Jacometo, D.E. Graugnard, M.N. Corrêa, E. Schmitt, **F.C. Cardoso**, J.J. Looor. (2014). Overfeeding Dairy Cattle during Late-pregnancy Alters Hepatic PPAR α -regulated Pathways Including Hepatokines: Impact on Metabolism and Peripheral Insulin Sensitivity. *Gene Regulation and Systems Biology*. 8:97-111.
- + * 11) Drackley, J.K. and **F.C. Cardoso**. (2014). Parturition and postpartum nutritional management to optimize fertility in high-yielding dairy cows in confined TMR systems. *Animal*. 8(supplement1):5-14.
- * 12) Akbar, H., T.M. Grala, M. Vailati Riboni, **F.C. Cardoso**, G. Verkerk, J. McGowan, K. Macdonald, J. Webster, K. Schultz, S. Meier, L. Matthews, J.R. Roche, J.J. Looor. (2015). Body condition score at calving affects systemic and hepatic transcriptome indicators of inflammation and nutrient metabolism in grazing dairy cows. *Journal of Dairy Science*. 98:1019-1032.
- * 13) Jahani-Moghaddam, M., E. Mahjoubi, M. Hossein Yazdi, **F.C. Cardoso**, J.K. Drackley. (2015). Effects of alfalfa hay and its physical form (chopped vs. Pelleted) on performance of Holstein calves. *Journal of Dairy Science*. 98:4055-61.
- * Δ \wedge 14) Pineda, A. and **F.C. Cardoso**. (2015). Effects of rumen-protected choline with calcium salts of long chain fatty acids on milk yield and milk composition of middle and late lactation Holstein cows. *Livestock Science*. 175:47-58.
- * # Δ \wedge 15) Barrera, A. G., N. Angeli, L. Machado, **F.C. Cardoso**, F. Gonzalez. (2015). Relationships between heat stress and metabolic and milk parameters in dairy cows in southern Brazil. *Tropical Animal Health Production*. 47(5):889-94.
- * Δ 16) Zhou, Z., D.P. Bu, M. Vailati Riboni, M.J. Khan, D.E. Graugnard, J. Luo, **F.C. Cardoso**, J.J. Looor. (2015). Parturition dietary energy level affects periparturition bovine blood neutrophil metabolic, antioxidant, and inflammatory gene expression. *Journal of Dairy Science*. 98:5492-5505.
- * Δ 17) Minuti, A, Z. Zhou, D.E. Graugnard, S.L. Rodriguez-Zas, A.R. Palladino, **F.C. Cardoso**, E. Trevisi, and J.J. Looor. (2015). Acute mammary and liver transcriptome responses after an intramammary *Escherichia coli* lipopolysaccharide challenge in postparturition dairy cows. *Physiological Reports*. 3:1-12.
- * # Δ \wedge 18) Meteer, W.C., D.W. Shike, and **F.C. Cardoso**. (2015). Review: Parturition and Postparturition Nutritional Management to Optimize Fertility in Beef Cattle. *Acta Scientiae Veterinariae*. 43:1-18.
- * # Δ \wedge 19) Luan, S., M. Duersteler, E.A. Galbraith, **F.C. Cardoso**. (2015). Effects of direct-fed *Bacillus pumilus* 8G-134 on feed intake, milk yield, milk composition, feed conversion, and health condition of pre- and postparturition Holstein cows. *Journal of Dairy Science*. 98:6423-6432.
- * Δ 20) Minuti, A., A. Palladino, S. Alqarni, A. Agrawal, F. Piccioli-Capelli, F. Hidalgo, **F.C. Cardoso**, E. Trevisi, J.J. Looor. (2015). Abundance of ruminal bacteria, epithelial gene expression, and systemic biomarkers of metabolism and inflammation are altered during the periparturition period in dairy cows. *Journal of Dairy Science*. 98:8940-8951.
- * # Δ \wedge 21) Haerr, K.J., N.M. Lopes, M.N. Pereira, G.M. Fellows, **F.C. Cardoso**. (2015). Corn silage from corn treated with foliar fungicide and performance of Holstein cows. *Journal of Dairy Science*. 98:8962-8972.

- * # Δ ^ 22) Pineda, A. and **F.C. Cardoso.** (2015). Validation of a hand-held meter for measuring β -hydroxybutyrate concentrations in plasma and serum from dairy cows. *Journal of Dairy Science.* 98:8818-8824.
- * Δ 23) Gonçalves, R.S., F.C. Cardoso, F. Guagnini, L.J.R. Catañeda, F. Gonzalez. (2015). Administration of early post-partum oral Drench in dairy cows: effect on metabolic profile. *Revista Medicina Veterinaria Zootecnia.* 62(3):10-17.
- * 24) Osorio, J.S., C.B. Jacometo, D. Luchini, **F.C. Cardoso,** J.J. Loor. (2016). Hepatic global DNA and PPAR α promoter methylation are altered in periparturient dairy cows fed rumen-protected methionine. *Journal of Dairy Science.* 99:23-44.
- * # Δ ^ 25) Luan, S., K. Cowles, M.R. Murphy, **F.C. Cardoso.** (2016). Effect of a grain challenge on ruminal, urine, and fecal pH, apparent total-tract starch digestibility, and milk composition of Holstein and Jersey cows. *Journal of Dairy Science.* 99:2190-2200.
- * # Δ ^ 26) Acosta, D.A.V., A.C. Denicol, P. Tribulo, M.I. Rivelli, C. Skenandore, Z. Zhou, D. Luchini, M.N. Corrêa, P.J. Hansen, F.C. Cardoso. (2016). Effects of rumen-protected methionine and choline supplementation on the preimplantation embryo in Holstein cows. *Theriogenology.* 85:1669-1679.
- * # Δ ^ 27) Pineda, A., J.K. Drackley, J. Garrett, and F.C. Cardoso. (2016). Effects of rumen-protected niacin on milk production and body temperature of middle and late lactation Holstein cows. *Livestock Science.* 187:16-23.
- * Δ 28) McCann, J.C., S. Luan, F.C. Cardoso, H. Derakhshani, E. Khafipour, and J.J. Loor. (2016). Induction of subacute ruminal acidosis affects the ruminal microbiome and epithelium. *Frontiers in Microbiology.* May (7); Article 701:1-18.
- * Δ 29) Meteer, W.C., T.B. Wilson, D.H. Keisler, F.C. Cardoso, and D.W. Shike. (2016). Effects of prepartum plane of nutrition during mid- or late gestation on beef cow body weight, body condition score, blood hormone concentrations, and preimplantation embryo. *Italian Journal of Animal Science.* 15(2):264-274.
- * # Δ ^ 30) Sulzberger, S., C.C. Kalebich, S. Melnichenko, and F.C. Cardoso. (2016). Effects of clay after a grain challenge on ruminal, blood, and fecal pH, and milk composition of Holstein cows. *Journal of Dairy Science.* 99: 8028-8040.
- * 31) Zhou, Z., O. Bulgari, M. Vailati-Riboni, E. Trevisi, M.A. Ballou, **F.C. Cardoso,** D. Luchini, and J.J. Loor. (2016). Rumen-protected methionine compared with rumen-protected choline improves immunometabolic status in dairy cows during the periparturient period. *Journal of Dairy Science.* 99:8956-8969.
- * # Δ 32) Pineda, A., M.A. Ballou, J.M. Campbell, F.C. Cardoso, and J.K. Drackley. (2016). Evaluation of serum protein-based arrival formula and serum protein supplement (Gammulin) on growth, morbidity, and mortality of stressed (transport and cold) male dairy calves. *Journal of Dairy Science.* 99:9027-9039.
- * ^ 33) Ruiz-Rodriguez, C.T., J.R. Brandt, R. Oliveiro, Y. Ishida, N. Guedj, E.F. Garrett, G.K. Bar-Gal, N. Nikolaidis, **F.C. Cardoso,** and A.L. Roca. (2016). Polymorphisms of the Toll-like receptor 2 of goats (*Capra hircus*) may be associated with somatic cell count in milk. *Animal Biotechnology.* Published online: 28 Oct 2016. Pages 1-8.
<http://dx.doi.org/10.1080/10495398.2016.1232267>
- * # Δ ^ 34) Haerr, K.J., A. Pineda, N.M. Lopes, J.D. Weems, C.A. Bradley, M.N. Pereira, M.R. Murphy, G.M. Fellows, F.C. Cardoso. (2016). Effects of corn treated with foliar fungicide on in situ corn silage degradability in Holstein cows. *Animal Feed Science and Technology.* 222:149-157.
- * # Δ ^ 35) Sulzberger, S., S. Melnichenko, and F.C. Cardoso. (2017). Effects of clay after an aflatoxin challenge on aflatoxin clearance, milk production, and metabolism of Holstein cows. *Journal of Dairy Science.* 100:1856-1869.

- * 36) Derakhshani, H, H.M. Tun, **F.C. Cardoso**, J.C. Plaizier, E. Khafipour, and J.J. Loor. (2017). Linking periparturient dynamics of rumen microbiota to dietary changes and production parameters. *Frontiers in Microbiology*. 12 January. <https://doi.org/10.3389/fmicb.2016.02143>.
- * # Δ ^ 37) Kalebich, C.C., M.E. Weatherly, K.N. Robinson, G.M. Fellows, M.R. Murphy, and **F.C. Cardoso**. (2017). Foliar fungicide (pyraclostrobin) application effects on plant composition of a silage variety corn. *Animal Feed Science and Technology*. 225:38-53.
- * # Δ ^ 38) C.S. Skenandore, A. Pineda, J.M. Bahr, A.E. Newell-Fugate, and **F.C. Cardoso**. (2017). Evaluation of a commercially available radioimmunoassay and enzyme immunoassay for the analysis of progesterone and estradiol and the comparison of two extraction efficiency methods. *Domestic Animal Endocrinology*. 60:61-66.
- * # Δ ^ 39) Acosta, D.A., M.I. Rivelli, C. Skenandore, Z. Zhou, D.H. Keisler, D. Luchini, M.N. Corrêa, and **F.C. Cardoso**. (2017). Effects of rumen-protected methionine and choline supplementation on steroidogenic potential of the first postpartum dominant follicle and expression of immune mediators in Holstein cows. *Theriogenology*. *In Press*.
- * # Δ ^ 40) Rivelli, M.I., S.Y. Morrison, K.J. Haerr, S. Rodriguez-Zas, and **F.C. Cardoso**. (2017). Nutrition, reproduction, and young stock performance in dairy farms throughout Illinois: a Dairy Focus Team approach. *The Professional Animal Scientist*. *In Press*.
- * # Δ ^ 41) Kalebich, C.C., M.E. Weatherly, K.N. Robinson, G.M. Fellows, M.R. Murphy, and **F.C. Cardoso**. (2017). Foliar fungicide (pyraclostrobin) application on corn and its effects on corn silage composition. *Animal Feed Science and Technology*. *In press*.

Creative Works (Exhibitions, Commissions, Competitions, Performances, Designs, Art or Architecture Executed)

1. Dairy Focus Lab. 2012. University of Illinois, Department of Animal Sciences. Extension. Dr. Cardoso developed this web site and serves as editor or author for posted materials. This comprehensive dairy focused site is accessible through a unique link and is linked to the Department of Animal Sciences and University of Illinois Extension. <http://www.dairyfocus.illinois.edu>
2. The web site provides educational materials in the areas of dairy nutrition, reproduction, and management; such as:
 - a. Dairy Efficiency Calculator part of the “Dairy Focus Toolbox” (i.e. income over feed cost). Excel file is available on-line for download by users. More than 145 downloads (dairy farmers, veterinarians, nutritionists, professors, and students) from more than 34 different countries.
 - b. Dairy Somatic Cell Count Calculator part of the “Dairy Focus Toolbox” (i.e. mastitis prevention). Excel file is available on-line for download by users. More than 212 downloads (dairy farmers, veterinarians, nutritionists, professors, and students) from more than 32 different countries.
 - c. Dairy Focus Newsletter. More than 82 subscribers (dairy farmers, veterinarians, nutritionists, professors, and students) from more than 17 different countries.
 - d. YouTube videos (17) that collectively have had more than 7,700 visualizations in more than 20 different countries.
 - e. Podcasts (3) that were broadcasted through web based radio stations.
 - f. Social media (Facebook) with more than 355 people connected (likes) from more than 40 different countries.
 - g. “Press mentions” section with more than 40 articles that were reported by the press as a result of formal and informal interviews to Dr. Cardoso.
 - h. Section with information in Spanish for users with no English skills.

3. Margin Protection Program Webinar for dairy producers. Organizer and speaker. Title: “Dairy Focus toolbox – understanding of income over feed cost (IOFC)”. Generated a file with the webinar presentation that is available at the Dairy Focus Lab webpage. Date: September 16, 2014. Live from noon to 1PM.
4. Contributed with the YouTube video (<https://www.youtube.com/watch?v=jIhd8buSpHU>) entitled “Using Metrichheck to Detect Metritis in Post-Partum Dairy Cows” in the chapter entitled “Understanding and Managing Postpartum Uterine Diseases” by Stephen LeBlanc and Rodrigo Carvalho Bicalho in the E-book Large Dairy Herd Management, 3rd ed., 2017.

Bulletins, Reports, or Conference Proceedings (in print or accepted)

Proceedings

- 1) **Cardoso, F. C.** “3-R Transition Period: Recovery, Reproduction and Results”. Proceedings of the Four-State Dairy Nutrition & Management Conference, June 12 & 13, 2013 – Dubuque, IA. Pages 54-58.
- 2) **Cardoso, F. C.** “Transitioning with Efficiency, is it possible?” Proceedings of the Four-State Dairy Nutrition & Management Conference, June 11 & 12, 2014 – Dubuque, IA. Pages 62-68.
- 3) **Cardoso, F. C.** and J. K. Drackley. “Can Amino Acid Supplementation Improve use of Non-Milk Proteins in Milk Replacers?” Proceedings of the Four-State Dairy Nutrition & Management Conference, June 11 & 12, 2014 – Dubuque, IA. Pages 94-99.
- 4) Luchini, D., M. Wiltbank, R. Shaver, and **F. C. Cardoso**. “The effects of Transition Cow Nutrition on subsequent reproduction”. Proceedings of the Pacific Northwest Animal Nutrition Conference, October 8 & 9, 2014 – Vancouver, British Columbia – CAN.
- 5) **Cardoso, F. C.** “Manejo Nutricional Pré e Pós-Parto para Otimizar a Fertilidade em Vacas de Leite”, (Dairy Nutrition for the Transition Period to Optimize Fertility in Dairy Cows). Proceedings of the I Simpósio da Vaca Leiteira, November 7-8, 2014 – Porto Alegre, RS, Brazil. Pages 15-33.
- 6) Schwab, C., **F. C. Cardoso**, G. Foster, R. Higgs. “Effect of Starch Type on Optimizing Amino Acids in Diets of Dairy Cows”. Proceedings of the Formuleite Conference, November 27-28, 2014 – Lavras, MG, Brazil. Pages 39-45.
- 7) **Haerr, K.** and **F. C. Cardoso**. “Corn Silage: Fungal Disease, the Silent Killer?” Proceedings of the Four-State Dairy Nutrition & Management Conference, June 10 & 11, 2015 – Dubuque, IA. Pages 70-77.
- 8) **Cardoso, F. C.** Displacement of Abomasum in Dairy Cattle – Prevalence, Management, and Diagnostic Tools. Proceedings of the II Simpósio da Vaca Leiteira, October 23-24, 2015 – Porto Alegre, RS, Brazil. Pages 253-272.
- 9) **Cardoso, F. C.** “Impact of feeding amino acids on reproduction”. Proceedings of the Four-State Dairy Nutrition & Management Conference, June 15 & 16, 2016 – Dubuque, IA. Pages 60-67.
- 10) **Cardoso, F. C.** “Pre- and postpartum nutritional management to optimize energy balance and fertility in dairy cows”. Proceedings of the Florida Ruminant Nutrition Conference, February 7 & 8, 2017 – Gainesville, FL. Pages 71-85.

Popular Press Publications

- 1) **Cardoso, F. C.** 2014. Illinois Milk Producers’ Association (IMPA) Newsletter. Dr. Cardoso’s Cow Column: Corn silage topic. July.
- 2) **Cardoso, F. C.** 2014. Illinois Milk Producers’ Association (IMPA) Newsletter. Dr. Cardoso’s Cow Column: Reproduction 1 topic. October.
- 3) **Cardoso, F. C.** 2014. “Las 3 R en transición: recuperación, reproducción y resultados – I”. Albéitar, Zaragoza - Spain, N. 180 p 40-41, November. *In Spanish*.
- 4) **Cardoso, F. C.** 2014. “Las 3 R en transición: recuperación, reproducción y resultados – II”. Albéitar, Zaragoza - Spain, N. 181 p 40-42, December. *In Spanish*.
- 5) **Cardoso, F. C.** 2014. Illinois Milk Producers’ Association (IMPA) Newsletter. Dr. Cardoso’s Cow Column: Reproduction 2 topic. December.

- 6) **Cardoso, F. C.** 2015. Illinois Milk Producers' Association (IMPA) Newsletter. Dr. Cardoso's Cow Column: Feeding calves during the winter. March.
- 7) **Cardoso, F. C.** 2015. "It's the change that matters". Hoards Dairyman, Fort Atkinson - WI, N. 9 p 333-334, May.
- 8) **Cardoso, F. C.** 2015. "Es el cambio el que importa". Hoards Dairyman, Valle de los Pinos - Mexico, N. 247 p 414-415, July. *In Spanish.*
- 9) **Cardoso, F. C.** 2015. Illinois Milk Producers' Association (IMPA) Newsletter. Dr. Cardoso's Cow Column: Body condition score; watch for the change. July.
- 10) **Haerr, K** and **F. C. Cardoso.** 2015. "Is fungal disease the silent killer of corn silage?" Progressive Dairyman, Jerome - ID, N. 13 p 64-66, August.
- 11) **Haerr, K** and **F. C. Cardoso.** 2015. "Corn silage: Fungal disease, the silent killer?" Midwest Forage Association – Forage Focus, St. Paul - MN, p 6-7, August.
- 12) **Weatherly, M.** and **F. C. Cardoso.** 2015. Illinois Milk Producers' Association (IMPA) Newsletter. Dr. Cardoso's Cow Column: Are your cows drinking enough water? October.
- 13) **Cardoso, F. C.** 2015. Illinois Milk Producers' Association (IMPA) Newsletter. Dr. Cardoso's Cow Column: Nutritional management before calving can improve fertility in dairy cows. December.
- 14) **Cardoso, F. C.** 2016. "Milk Quality and Antibiotic Residue Avoidance" Progressive Dairyman, Jerome – ID. May 18th.
- 15) **Cardoso, F. C.** 2016. Illinois Milk Producers' Association (IMPA) Newsletter. Dr. Cardoso's Cow Column: Veterinary Feed Directive Update and Milk Quality. May.
- 16) **Kalebich, C.** and **F. C. Cardoso.** 2016. "Foliar fungicide effects on corn" Midwest Forage Association – Forage Focus, St. Paul - MN, p 15, May.
- 17) **Kalebich, C.** and **F. C. Cardoso.** 2016. "Effects of foliar fungicide application on silage corn" Progressive Dairyman, Jerome - ID, p 52-54, July 1.
- 18) **Sulzberger, S., Y. Khidoyatov,** and **F. C. Cardoso.** 2016. "Using clay as a buffer in the diet of lactating dairy cows" Progressive Dairyman, Jerome - ID, p 48-49, July 1.
- 19) **Cardoso, F. C.** 2016. Illinois Milk Producers' Association (IMPA) Newsletter. Dr. Cardoso's Cow Column: The right amount of methionine can boost cow fertility. November.
- 20) **Cardoso, F. C.** 2016. "Impacto de los aminoácidos en la reproducción – I". Albéitar, Zaragoza - Spain, N. 201 p 32-34, November. *In Spanish.*
- 21) **Cardoso, F. C.** 2016. "Impacto de los aminoácidos en la reproducción – II". Albéitar, Zaragoza - Spain, N. 202 p 24-25, December. *In Spanish.*
- 22) **Cardoso, F. C.** 2016. "Hit the methionine target". Hoards Dairyman, Fort Atkinson - WI, N. 20 p 741, December.
- 23) **Cardoso, F. C.** 2017. "10 Steps for a successful transition period, part 1" Progressive Dairyman, Jerome – ID. p 54-55, February 25.

Departmental Publications

Dr. Cardoso produced 15 articles as part of his Dairy Focus Newsletter series. Articles are available at: <http://dairyfocus.illinois.edu/content/dairy-focus-newsletter>

Abstracts (in print or accepted)

Since his appointment Dr. Cardoso had 63 abstracts published in national and international conference proceedings. Thirty-nine (39) were authored or co-authored by Dr. Cardoso and his students.

James K. Drackley

Education

Ph.D., 1989, Iowa State University, Ames

M.S., 1985, South Dakota State University, Brookings

B.S., 1981, South Dakota State University, Brookings

Academic Positions

University of Illinois

Professor, University of Illinois, 2000 - present

Associate Professor, University of Illinois, 1995 - 2000

Assistant Professor, University of Illinois, 1989 - 1995

Select Publications:

Books Authored or Co-Authored (Original Editions)

Davis, C. L., and J. K. Drackley. 1998. The Development, Nutrition, and Management of the Young Calf. Iowa State University Press, Ames. 339 pages.

Chapters in Books

Drackley, J. K. 2023. Advances in understanding lipid requirements and utilisation in dairy cattle. In Hristov, A. N. (ed.), Advances in Sustainable Dairy Cattle Nutrition, Burleigh Dodds Science Publishing, Cambridge, UK .

Drackley, J. K., and C. K. Reynolds. 2021. The impact of improving feed efficiency on the environmental impact of livestock production. Chapter 7 in Baines, R. (ed.), Reducing Greenhouse Gas Emissions from Livestock Production, Burleigh Dodds Science Publishing, Cambridge, UK

Beever, D. E., and J. K. Drackley. 2013. Feeding for optimal rumen and animal health and optimal feed conversion efficiency: the importance of physical nutrition. Pages 75-92 in Optimization of Feed Use Efficiency in Ruminant Production Systems. Proceedings of the FAO Symposium, 27 November 2012, Bangkok, Thailand. H.P.S. Makkar and D. Beever, ed. FAO Animal Production and Health Proceedings, No. 16. Rome, FAO and Asian-Australasian Association of Animal Production Societies.

Drackley, J. K., and H. M. Dann. 2008. A scientific approach to feeding dry cows. Chapter 3 in Recent Advances in Animal Nutrition " 2007. P.C. Garnsworthy and J. Wiseman, ed. Nottingham University Press, Nottingham, UK.

Drackley, J. K. 2006. Advances in transition cow biology: New frontiers in production diseases. Pages 24-34 in Production Diseases in Farm Animals. Proceedings 12th International Conference. N. Joshi and T. H. Herdt, ed. Wageningen Academic Publishers, Wageningen, The Netherlands.

Drackley, J. K., and J. B. Andersen. 2006. Splanchnic metabolism of long-chain fatty acids in ruminants. Pages 199-224 in Ruminant Physiology: Digestion, Metabolism and Impact of Nutrition on Gene Expression, Immunology and Stress. K. Sejrsen, T. Hvelplund and M.O. Nielsen, ed. Proceedings 10th International Symposium on Ruminant Physiology, Copenhagen, DK. Wageningen Academic Publishers, Utrecht, Netherlands.

Biographical Sketch

Drackley, J. K. 2005. Early growth effects on subsequent health and performance of dairy heifers. Chapter 12 in *Calf and Heifer Rearing*. P.C. Garnsworthy, ed. Nottingham University Press, Nottingham, UK, pages 213-235.

Van Amburgh, M., and J. Drackley. 2005. Current perspectives on the energy and protein requirements of the pre-weaned calf. Chapter 5 in *Calf and Heifer Rearing*. P.C. Garnsworthy, ed. Nottingham University Press, Nottingham, UK, pages 67-82.

Drackley, J. K. 2005. Interorgan lipid and fatty acid metabolism in growing ruminants. Chapter 13 in *Biology of Metabolism in Growing Animals*. D. G. Burrin and H. J. Mersmann, ed. Elsevier Limited, Edinburgh, UK, pages 323-350.

Drackley, J. K. 2000. Lipid metabolism. Chapter 5 in *Farm Animal Metabolism and Nutrition: Critical Reviews*. J.P.F. D'Mello, ed. CAB International, Wallingford, Oxon, UK, pages 97-119.

Selected Articles in Journals

228. Ottemann Abbamonte, C. J., T. R. Overton, A. D. Beaulieu, and J. K. Drackley. 2023. In vitro addition of epinephrine, norepinephrine, and carnitine alters palmitate oxidation and esterification in isolated ovine hepatocytes. *J. Dairy Sci.* 106:3633-3640.

227. Ortiz Gonzalez, G., E. G. Perkins, and J. K. Drackley. 2023. Milk triglycerides from dairy cows abomasally infused with increasing amounts of high-oleic sunflower fatty acids. *J. Dairy Sci.* 106:2428-2437.

226. Janovick, N. A., E. Trevisi, G. Bertoni, H. M. Dann, and J. K. Drackley. 2023. Prepartum plane of energy intake affects serum biomarkers for inflammation and liver function during the periparturient period. *J. Dairy Sci.* 106:168-186.

Honors

Spitze Land Grant Professorial Career Excellence Award, College of Agricultural, Consumer and Environmental Sciences, University of Illinois, 2022

Journal of Dairy Science Top 100 Author, 2017

Fellow, American Dairy Science Association, 2015

Paul A. Funk Recognition Award, College of Agricultural, Consumer and Environmental Sciences, University of Illinois, 2008

Nutrition Professionals, Inc. Applied Dairy Nutrition Award, American Dairy Science Association, 2007
Senior Faculty Award for Excellence in Research, College of Agricultural, Environmental and Consumer Sciences, University of Illinois, 2007

AFIA Award for Excellence in Dairy Nutrition Research, American Dairy Science Association, 2002

Beckman Associate, Center for Advanced Study, University of Illinois, 2000

H. H. Mitchell Award for Excellence in Graduate Teaching and Research, Department of Animal Sciences, University of Illinois, 2000

Scholar Award, American Dairy Science Association Foundation, 1998

College Faculty Award for Excellence in Research, College of ACES, 1998

Agway Inc. Young Scientist Award, American Dairy Science Association, 1997

D. E. Becker Award for Excellence in Undergraduate Teaching and Counseling, Department of Animal Sciences, 1993

Brian M. Aldridge

Education

Ph.D., University of Wisconsin-Madison, Animal Health and Biomedical Sciences · (1993 - 1999)

MS, Colorado State University, Veterinary Medicine · (1989 - 1992)

BVSc, University of Liverpool, Veterinary Medicine · (1979 - 1984)

Recent Courses Taught

VCM 507 - Veterinary Form and Function

VCM 509 - Biology of Veterinary Pathogen

VCM 513 - Science of Health Homeostasis

VCM 514 - Science of Health Evaluation

VCM 524 - Effective Biomedical Teacher

VCM 560 - Livestock Infectious Disease

VCM 562 - Infection Defense

VCM 564 - Livestock Business

VCM 577 - Immunology/Toxicology

VCM 592 - Production Medicine

VCM 593 - Herd Health

VCM 595 - Integrative Capstone II

VCM 598 - Manuscript Research

VCM 672 - Food Supply Disease Prevention

VCM 688 - Food Supply Disease Management

VCM 690 - Intro to Food Supply Medicine

Professional Experience

Carle Illinois College of Medicine

Health Innovation Professor

2021 – Present

University of Illinois College of Veterinary Medicine

Clinical Professor

2012 - Present

TGS Illuminate

Director

2011 – Present

Online Veterinary Academy

Coordinator

2011 - 2012

University of Cambridge

Farm Animal Clinician

2011 - 2012

Royal Veterinary College

Chair, Farm Animal Health and Production

2005 - 2010

Select Publications:

Hubner, A. M., Canisso, I. F., Coelho, W. M., Ribeiro, L., Aldridge, B. M., & Lima, F. S. (2022). A randomized controlled trial examining the effects of treatment with propylene glycol and injectable

Biographical Sketch

cyanocobalamin on naturally occurring disease, milk production, and reproductive outcomes of dairy cows diagnosed with concurrent hyperketonemia and hypoglycemia. *Journal of Dairy Science*, 105(11), 9070-9083. <https://doi.org/10.3168/jds.2021-21328>

Li, J., Green-Miller, A. R., Hu, X., Lucic, A., Mahesh Mohan, M. R., Dilger, R. N., Condotta, I. C. F. S., Aldridge, B., Hart, J. M., & Ahuja, N. (2022). Barriers to computer vision applications in pig production facilities. *Computers and Electronics in Agriculture*, 200, [107227]. <https://doi.org/10.1016/j.compag.2022.107227>.

Hubner, A., Canisso, I. F., Peixoto, P. M., Coelho, W. M., Ribeiro, L., Aldridge, B. M., Menta, P., Machado, V. S., & Lima, F. S. (2022). Characterization of metabolic profile, health, milk production, and reproductive outcomes of dairy cows diagnosed with concurrent hyperketonemia and hypoglycemia. *Journal of Dairy Science*, 105(11), 9054-9069. <https://doi.org/10.3168/jds.2021-21327>

Migliorisi, A., Hart, K., Vaughn, S., Austin, S., Aldridge, B., & Wilkins, P. (2022). Plasma ascorbic acid, antioxidant capacity, and reactive oxygen species in healthy foals. *American journal of veterinary research*, 83(9). <https://doi.org/10.2460/ajvr.22.02.0025>

Zeineldin, M., Megahed, A., Blair, B., Aldridge, B., & Lowe, J. (2021). Metagenomic Analysis of the Fecal Archaeome in Suckling Piglets Following Perinatal Tulathromycin Metaphylaxis. *Animals*, 11(6), [1825]. <https://doi.org/10.3390/ani11061825>

Megahed, A., Aldridge, B., & Lowe, J. (2020). Antimicrobial Efficacy of Aqueous Ozone and Ozone–Lactic Acid Blend on Salmonella-Contaminated Chicken Drumsticks Using Multiple Sequential Soaking and Spraying Approaches. *Frontiers in Microbiology*, 11, [593911]. <https://doi.org/10.3389/fmicb.2020.593911>

Zeineldin, M., Lowe, J., & Aldridge, B. (2020). Effects of Tilmicosin Treatment on the Nasopharyngeal Microbiota of Feedlot Cattle With Respiratory Disease During the First Week of Clinical Recovery. *Frontiers in Veterinary Science*, 7, [115]. <https://doi.org/10.3389/fvets.2020.00115>

Zeineldin, M., Aldridge, B., & Lowe, J. (2019). Antimicrobial effects on swine gastrointestinal microbiota and their accompanying antibiotic resistome. *Frontiers in Microbiology*, 10(MAY), [1035]. <https://doi.org/10.3389/fmicb.2019.01035>

Megahed, A., Aldridge, B., & Lowe, J. (2019). Comparative study on the efficacy of sodium hypochlorite, aqueous ozone, and peracetic acid in the elimination of Salmonella from cattle manure contaminated various surfaces supported by Bayesian analysis. *PloS one*, 14(5), [e0217428]. <https://doi.org/10.1371/journal.pone.0217428>

Zeineldin, M., Lowe, J., & Aldridge, B. (2019). Contribution of the Mucosal Microbiota to Bovine Respiratory Health. *Trends in Microbiology*, 27(9), 753-770. <https://doi.org/10.1016/j.tim.2019.04.005>

Zeineldin, M., Megahed, A., Burton, B., Blair, B., Aldridge, B., & Lowe, J. F. (2019). Effect of single dose of antimicrobial administration at birth on fecal microbiota development and prevalence of antimicrobial resistance genes in piglets. *Frontiers in Microbiology*, 10(JUN), [1414]. <https://doi.org/10.3389/fmicb.2019.01414>

Isabella C.F.S. Condotta

Education

PhD, Escola Superior de Agricultura "Luiz de Queiroz," Agricultural Systems Engineering - Precision Animal Management · (2017 - 2019)

MS, Escola Superior de Agricultura "Luiz de Queiroz," Agricultural Systems Engineering - Precision Animal Management · (2016 - 2017)

Lic., Escola Superior de Agricultura "Luiz de Queiroz," Agricultural Sciences · (2013 - 2016)

BS, Escola Superior de Agricultura "Luiz de Queiroz," Bachelor's degree, Agricultural Engineering · (2011 - 2015)

Certifications

Illinois Summer Teaching Institute 2021

Professional Experience

University of Illinois Urbana-Champaign

Assistant Professor

February 2020 - Present

University of Nebraska-Lincoln

Post-Doctoral Research Associate

June 2019 - February 2020

Select Publications:

Xiong, Y., Condotta, I. C. F. S., Musgrave, J. A., Brown-Brandl, T. M., & Mulliniks, J. T. (2023). Estimating Body Weight and Body Condition Score of Mature Beef Cows using Depth Images. *Translational Animal Science*. <https://doi.org/10.1093/tas/txad085>

Li, J., Green-Miller, A. R., Hu, X., Lucic, A., Mahesh Mohan, M. R., Dilger, R. N., Condotta, I. C. F. S., Aldridge, B., Hart, J. M., & Ahuja, N. (2022). Barriers to computer vision applications in pig production facilities. *Computers and Electronics in Agriculture*, 200, [107227]. <https://doi.org/10.1016/j.compag.2022.107227>

Ramirez, B. C., Hayes, M. D., Condotta, I. C. F. S., & Leonard, S. M. (2022). Impact of housing environment and management on pre-/post-weaning piglet productivity. *Journal of animal science*, 100(6), [skac142]. <https://doi.org/10.1093/jas/skac142>

Kamchen, S. G., Fernandes dos Santos, E., Lopes, L. B., Vendrusculo, L. G., & Condotta, I. C. F. S. (2021). Application of depth sensor to estimate body mass and morphometric assessment in Nellore heifers. *Livestock Science*, 245, [104442]. <https://doi.org/10.1016/j.livsci.2021.104442>

Silva, S. R., Almeida, M., Condotta, I., Arantes, A., Guedes, C., & Santos, V. (2021). Assessing the Feasibility of Using Kinect 3D Images to Predict Light Lamb Carcasses Composition from Leg Volume. *Animals*, 11(12), [3595]. <https://doi.org/10.3390/ani11123595>

Benicio, L. M., Da Silva Miranda, K. O., Brown-Brandl, T., Purswell, J. L., Sharma, S. R., & Condotta, I. C. F. S. (2021). Broilers' Weight Estimation through Depth Image Analysis. In *American Society of Agricultural and Biological Engineers Annual International Meeting, ASABE 2021* (pp. 2057-2062). (American Society

Biographical Sketch

of Agricultural and Biological Engineers Annual International Meeting, ASABE 2021; Vol. 4). American Society of Agricultural and Biological Engineers. <https://doi.org/10.13031/aim.202100803>

Pacheco, V. M., Condotta, I. C. F. S., Martello, L. S., Psota, E., & Brown-Brandl, T. M. (2020). *An indoor performance comparison of time-of-flight depth cameras*. Paper presented at 2020 ASABE Annual International Meeting, Virtual, Online. <https://doi.org/10.13031/aim.202001021>

Condotta, I. C. F. S., Brown-Brandl, T. M., Rohrer, G. A., & Silva-Miranda, K. O. (2020). *Development of method for lameness detection based on depth image analysis*. Paper presented at 2020 ASABE Annual International Meeting, Virtual, Online. <https://doi.org/10.13031/aim.202001082>

Condotta, I. C. F. S., Brown-Brandl, T. M., Pitla, S. K., Stinn, J. P., & Silva-Miranda, K. O. (2020). Evaluation of low-cost depth cameras for agricultural applications. *Computers and Electronics in Agriculture*, 173, [105394]. <https://doi.org/10.1016/j.compag.2020.105394>

Condotta, I. C. F. S., Brown-Brandl, T. M., Rohrer, G. A., & Silva-Miranda, K. O. (2020). *Development of method for lameness detection based on depth image analysis*. Paper presented at 2020 ASABE Annual International Meeting, Virtual, Online. <https://doi.org/10.13031/aim.202001082>

Juan Loor

Education

Ph.D., 2001, Virginia Polytechnic Institute and State University, Blacksburg

M.S., 1997, Virginia Polytechnic Institute and State University, Blacksburg

B.S., 1995, University of California, Davis

Research Interests

Systems biology; molecular nutrition; genomics; metabolomics; bioinformatics; nutritional programming of adipose tissue; mammary gland development; lipid metabolism; conjugated linoleic acids (CLA); nutritional and physiological genomics; comparative genomics; regulation of milk fat and protein synthesis; nutritional regulation of muscle development. My research program focuses on the study of how nutrition, physiological state and their interaction affect tissue function and metabolic adaptations through alterations in the transcriptome, i.e. mRNA expression profiles. We rely heavily on cutting-edge technologies such as microarrays, DNA sequencing, quantitative RT-PCR, and bioinformatics to generate biologically-meaningful data. The integration of these data sets is at the core of our Systems Biology efforts in Nutritional Sciences. We use large animals as primary models but also perform more fundamental studies with animal tissue cell lines or explant cultures. Through the use of high-throughput techniques and bioinformatics we intend to identify genes that might be associated with susceptibility to immune and metabolic diseases (e.g. hepatic steatosis, mastitis) and also to developing obesity.

Professional Experience

2018-present: Professor of Animal Sciences and Division of Nutritional Sciences, Department of Animal Sciences, University of Illinois, Urbana

2011-2018: Associate Professor of Animal Sciences and Division of Nutritional Sciences, Department of Animal Sciences, University of Illinois, Urbana

2005-2011: Assistant Professor of Animal Sciences and Division of Nutritional Sciences, Department of Animal Sciences, University of Illinois, Urbana

2002-2005: Post-Doctoral Research Associate, Department of Animal Sciences, University of Illinois, Urbana

2001-2002: Post-Doctoral Research Associate, Unité de Recherches sur les Herbivores (URH), Institut National de la Recherche Agronomique (INRA), France

Select Publications:

Chapters in Books

M. Bionaz, W. Hurley, and J. J. Loor. Milk Protein Synthesis in the Lactating Mammary Gland: Insights from Transcriptomics Analyses. DOI: 10.5772/46054 In book: Milk Protein, Chapter: 11, Publisher: InTech. 2012

J. J. Loor, M. Bionaz, and G. Invernizzi. Systems Biology and Animal Nutrition. In Systems Biology and Livestock Science. M. F. W. te Pas, H. Woelders, and A. Bannink, ed., Wiley-Blackwell, Oxford, UK. 2012; doi: 10.1002/9780470963012.ch9.

Biographical Sketch

J. J. Loor. Genomics: Impact on Animal Agriculture. In *Encyclopedia of Biotechnology in Agriculture and Food*. D. R. Heldman, A. Bridges, D. Hoover, and M. B. Wheeler, ed. Taylor & Francis Group, LLC, NY. 2010; 316-319. ISBN: 0-8493-5027-1

W. L. Hurley, and J. J. Loor. Mammary Gland: Growth, Development, and Involution. In *Encyclopedia of Dairy Sciences*, 2nd edition. J. W. Fuquay, P. F. Fox, and P. McSweeney, ed. Elsevier Limited, Oxford, UK. 2011. ISBN: 978-0-12-374402-9

J. J. Loor, M. Bionaz, and W. L. Hurley. Mammary Gland: Gene Networks Controlling Development and Involution. In *Encyclopedia of Dairy Sciences*, 2nd edition. J. W. Fuquay, P. F. Fox, and P. McSweeney, ed. Elsevier Limited, Oxford, UK. 2011. ISBN: 978-0-12-374402-9

Selected Articles in Journals

Loor, J. J. 2010. Genomics of metabolic adaptations in the peripartal cow. *Animal* 4:1110-1139. Invited
Bionaz, M., and J.J. Loor. 2011. Gene networks driving bovine mammary protein synthesis during the lactation cycle. *Bioinformatics and Biology Insights* 5:83-98.

Bionaz, M., B.J. Thering, and J.J. Loor. 2011. Fine metabolic regulation in ruminants via nutrient-gene interactions: saturated long-chain fatty acids increase expression of genes involved in lipid metabolism and immune response partly through PPAR- α activation. *British Journal of Nutrition* 107:179-191.

Bionaz, M., K. Periasamy, S.L. Rodriguez-Zas, R.E. Everts, H.A. Lewin, W.L. Hurley, and J.J. Loor. 2012. Old and new stories: revelations from functional analysis of the bovine mammary transcriptome during the lactation cycle. *PLoS One* 7:e33268.

Bionaz, M., K. Periasamy, S.L. Rodriguez-Zas, W.L. Hurley, and J.J. Loor. 2012. A novel dynamic impact approach (DIA) for functional analysis of time-course omics studies: validation using the bovine mammary transcriptome. *PLoS One* 7:e32455.

Bionaz, M., and J.J. Loor. 2012. Ruminant metabolic systems biology: reconstruction and integration of transcriptome dynamics underlying functional responses of tissues to nutrition and physiological state. *Gene Regulation and Systems Biology* 6:109-25. Invited

Shahzad, K., and J. J. Loor. 2012. Application of top-down and bottom-up systems approaches in ruminant physiology and metabolism. *Current Genomics* 13:379-394. Invited

Graugnard, D.E., K.M. Moyes, E. Trevisi, M.J. Khan, D. Keisler, J.K. Drackley, G. Bertoni, and J. J. Loor. 2013. Liver lipid content and inflammometabolic indices in peripartal dairy cows are altered in response to prepartal energy intake and postpartal intramammary inflammatory challenge. *Journal of Dairy Science* 96:918-935.

Loor, J. J., M. Bionaz, and J. K. Drackley. 2013. Systems physiology in dairy cattle: nutritional genomics and beyond. *Annual Review of Animal Biosciences* doi: 10.1146/annurev-animal-031412-103728. [Epub ahead of print] Invited

Joshua C. McCann

Education

PhD, Animal Sciences, University of Illinois

MS, Animal Science, Texas A & M University

BS, Animal Science, Texas Tech University

Thesis Title

Influence of nutrition on the muscle transcriptome and ruminal microbiome in cattle

Academic Positions

University of Illinois Urbana Champaign

Assistant Professor, [Animal Sciences](#)

Assistant Professor, Center for Digital Agriculture, [National Center for Supercomputing Applications \(NCSA\)](#)

Select Publications:

Beenken-Bobb, A. M., Dornbach, C. W., Deters, E. L., Shike, D. W., Hansen, S. L., & McCann, J. C. (2023). Effects of injectable vitamin C at weaning and prior to transit on growth performance of early-weaned beef steers. *Journal of animal science*, *101*, [skac307]. <https://doi.org/10.1093/jas/skac307>

Dornbach, C. W., Beenken-Bobb, A. M., Shike, D. W., Hansen, S. L., & McCann, J. C. (2023). Effects of injectable vitamin E before or after transit on receiving phase growth performance, health, and blood parameters of beef steers. *Journal of animal science*, *101*, [skac333]. <https://doi.org/10.1093/jas/skac333>

Shao, T., McCann, J. C., & Shike, D. W. (2023). Effects of Late Gestation Supplements Differing in Fatty Acid Amount and Profile to Beef Cows on Cow Performance, Steer Progeny Growth Performance through Weaning, and Relative mRNA Expression of Genes Associated with Muscle and Adipose Tissue Development. *Animals*, *13*(3), [437]. <https://doi.org/10.3390/ani13030437>

Myerscough, M. E., Neira, L. T., Sexton, K. H., Hofer, L. S., Trennepohl, K. M., Meteer, W. T., Chapple, W. P., McCann, J. C., & Shike, D. W. (2022). Effects of housing beef cow-calf pairs on drylot or pasture in the Midwest on production parameters and calf behavior through feedlot receiving. *Journal of animal science*, *100*(1), [skab357]. <https://doi.org/10.1093/jas/skab357>

Dawson, C. R., Henley, P. A., Schroeder, A. R., Meteer, W. T., Hayes, C. A., Felix, T., Shike, D. W., & McCann, J. C. (2022). Effects of rubber matting on feedlot cattle growth performance, locomotion, and carcass characteristics in slatted floor facilities. *Journal of animal science*, *100*(3), [skac041]. <https://doi.org/10.1093/jas/skac041>

Wu, J. X., Zong, C., Shao, T., Liang, Y. S., McCann, J. C., Dong, Z. H., Li, J. F., Zhang, J., & Liu, Q. H. (2021). Clarifying the relationships among bacteria, lipid-related enzymes, main polyunsaturated fatty acids and fat-soluble vitamins in alfalfa (*Medicago sativa* L.) silage using various sugar supplementations. *Animal Feed Science and Technology*, *272*, [114799]. <https://doi.org/10.1016/j.anifeedsci.2020.114799>

Biographical Sketch

Pittaluga, A. M., Yu, S., Li, W., & McCann, J. C. (2021). Effect of exogenous glucoamylase inclusion on in vitro fermentation and growth performance of feedlot steers fed a dry-rolled corn-based diet. *Translational Animal Science*, 5(2), [txab082]. <https://doi.org/10.1093/tas/txab082>

Harsh, B. N., Klatt, B. J., Volk, M. J., Green-Miller, A. R., & McCann, J. C. (2021). Effects of ractopamine hydrochloride on nutrient digestibility and nitrogen excretion of finishing beef cattle. *Translational Animal Science*, 5(2), [txab036]. <https://doi.org/10.1093/tas/txab036>

Shao, T., Ireland, F. A., McCann, J. C., & Shike, D. W. (2021). Effects of supplements differing in fatty acid profile to late gestational beef cows on cow performance, calf growth performance, and mRNA expression of genes associated with myogenesis and adipogenesis. *Journal of Animal Science and Biotechnology*, 12(1), [67]. <https://doi.org/10.1186/s40104-021-00588-w>

Shao, T., McCann, J. C., & Shike, D. W. (2021). Effects of Supplements Differing in Fatty Acid Profile to Late Gestational Beef Cows on Steer Progeny Finishing Phase Growth Performance, Carcass Characteristics, and mRNA Expression of Myogenic and Adipogenic Genes. *Animals*, 11(7), [1904]. <https://doi.org/10.3390/ani11071904>

Huizenga, K. A., & McCann, J. C. (2021). Investigating the Effects of Distillers Grains on Heifer Feeding Behavior in the Finishing Phase. *Animals*, 11(7), [1905]. <https://doi.org/10.3390/ani11071905>

Volk, M. J., Dawson, C. R., Ireland, F. A., Trennepohl, K. M., McCann, J. C., & Shike, D. W. (2020). Evaluation of parasite resistance in a beef cattle operation with use of extended-release eprinomectin for 3 years. *Applied Animal Science*, 36(4), 550-555. <https://doi.org/10.15232/aas.2020-02001>

Derek Nolan

Education

PhD, University of Kentucky

MS, University of Kentucky

BS, Dairy Science, Iowa State University

Research Focus

Milk quality and decision economics

Mission Statement

Dr. Nolan helps dairy producers reach their goals by providing tools to make informed management decisions and improve milk quality. He focuses on providing hands-on experiences that help youth better understand the dairy cow and dairy production system.

Academic Positions

University of Illinois Urbana Champaign

Teaching Assistant Professor

Extension Faculty Specialist

Select Publications:

Robles, I., Nolan, D. T., Fendley, C. A., Stokley, H. L., France, T. L., Ferrell, J. L., & Costa, J. H. C. (2021). Technical note: Evaluation of a commercial on-farm milk leukocyte differential tester to identify subclinical mastitis cases in dairy cows. *Journal of Dairy Science*, *104*(4), 4942-4949. <https://doi.org/10.3168/jds.2020-19299>

Guinn, J. M., Nolan, D. T., Krawczel, P. D., Petersson-Wolfe, C. S., Pighetti, G. M., Stone, A. E., Ward, S. H., Bewley, J. M., & Costa, J. H. C. (2019). Comparing dairy farm milk yield and components, somatic cell score, and reproductive performance among United States regions using summer to winter ratios. *Journal of Dairy Science*, *102*(12), 11777-11785. <https://doi.org/10.3168/jds.2018-16170>

Anna Leigh Ball

124 Mumford Hall, MC-170, 1301 W. Gregory Drive, Urbana IL, 61801 | aball@illinois.edu

Education:

PhD, University of Missouri May 2002, Major: Agricultural Education, Concentration: Teacher Education

MEd, University of Missouri, August 2000, Major: Practical Arts and Vocational Technical Education, Emphasis: Agricultural Education

BS, University of Illinois, December 1995, Major: Agricultural Education

Professional Experience:

University of Illinois, Urbana-Champaign

2019-present

Associate Dean for Academic Programs, College of Agriculture, Consumer and Environmental Sciences

University of Missouri, Columbia

Faculty Fellow for Faculty Affairs, Office of the Provost (2016-2019)

Director, Center for Educational Innovations, CAFNR (2011-2019)

Faculty Fellow, Broader Impacts Network, Office of Research and Graduate Studies (2014-2015)

Department of Agricultural Education and Leadership, Professor (2014-2019); Director of Graduate Studies (2016-2017); Chair (2010-2016); Director of Undergraduate Studies (2008-2010); Associate Professor (2008-2014)

University of Florida

2006-2008

Assistant Professor of Agricultural Education, Department of Agricultural Education and Communication **Director**, Teaching Resource Center, College of Agriculture and Life Sciences

University of Illinois

2002-2006

Assistant Professor of Agricultural Education, Department of Human and Community Development

Publications:

Mott, R., Simonsen, J., Tummons, J., Ball, A.L., & Vandermause, R. (in press). What is the meaning of livestock youth production? A hermeneutic phenomenological study. *Journal of Agricultural Education*.

Leman, A. M., Korte, D., & Ball, A. (2021). Faculty and student perceptions of the learning experience in an emergency transition to online learning. *NACTA Journal*, 65.

Bowling, A.M. & Ball, A.L. (2020). Supporting students' psychological needs and motivation within school-based agricultural education: a mixed methods study. *Journal of Agricultural Education* 61(2), 206-221. <https://doi.org/10.5032/jae.2020.02206>.

Bird, W., Bowling, A. M., & Ball, A. L. (2020). Civic engagement, autonomy, and reflection: Factors influencing youth self-perceived civic responsibility. *Journal of Agricultural Education*, 61(1), 203-220. doi: 10.5032/jae.2020.01203

Bowling, A. M., Ball, A. L., & Bird, W. (2020). Exploring motivational strategies, outcomes, and theories within the *Career Development Event preparation process*. *Journal of Agricultural Education*, 61(1), 221-234. doi: 10.5032/jae.2020.01221

Biographical Sketch

Bird, W., Bowling, A. M., & Ball, A. L. (2019) The role reflection plays in enhancing civic responsibility following FFA civic engagement activities. *Journal of Agricultural Education*, 60(1), 128 – 144. DOI: 10.5032/jae.2019.01128

Bowling, A. M., & Ball, A. L. (2018). Alternative certification: A solution or an alternative problem? *Journal of Agricultural Education*, 59(2), 109-122 <https://doi.org/10.5032/jae.2018.02109>

Cramer, S., Ball, A.L., & Hendrickson, M. (2019). "Our school system is trying to be agrarian": educating for reskilling and food system transformation in the rural school garden. *Agriculture and Human Values*, 36(4). DOI:10/1007.s10460-019-09942-1.

Cramer, S. & Ball, A.L. Wild leaves and narrow stems: exploring formal and nonformal education tensions through garden-based learning. *Journal of Agricultural Education*, 60(4), 35-52. doi: 10.5032/jae.2019.04035

Mott, R. L., Keller, K. J. M., Britt Rankin, J., & **Ball, A. L.** (2018). "Out of place around other people": Experiences of young people who live with food insecurity. *Children & Society*.

Honors and Awards:

E.B. Knight, Outstanding Journal Author Award, North American Colleges and Teachers of Agriculture, 2005. Article: Garton, B. L., Kitchel, T., & Ball A. L. (2005). University admission criteria and learning style: Predictors of academic success? *North American Colleges and Teachers of Agriculture Journal*, 49(2) 10.

- **Fellow**, American Association for Agricultural Education, 2016
- **Outstanding Member**, American Association for Agricultural Education, 2016
- **Excellence in College and University Teaching in the Food and Agricultural Sciences Award**, United States Department of Agriculture, 2014.

External Funding:

Findeis, J.L., (Lead P.I.) Parcell, J., **Henry [Ball], A.L.**, Boessen, C., Fulcher, C., Chaddad, F., & O'Brien, D., *University of Illinois USAID Soybean MRA*. University of Illinois Subcontract 2013, \$1,144,258.

Henry [Ball], A.L. & Simonsen, J. (Co-P.I.'s). *National Farm Business Management Benchmarking*. National Institute of Food and Agriculture, 2012, \$76,000.

Parcell, J, **Henry [Ball], A.L.** & Gedikoglu (Co-P.I.'s), *Student Understanding of Price-Risk Management through Experiential Learning via Distance Education Delivery*, United States Department of Agriculture Higher Education Challenge Grant, \$285,000

Ball, A.L. (Lead P.I.), & Knobloch, N.A. (Co-P.I.), *Developing Undergraduate-Faculty Partnerships to Enhance Learner-Centered Teaching in Colleges of Agriculture and Natural Resources*, USDA Higher Education Challenge Grants Program, 2005-2008, \$150,000

Knobloch, N. (P.I.) and **Ball, A.L.** (Co-P.I.), *A National Assessment of Learner Centered Approaches to Teaching in Colleges of Agriculture*, Higher Education Challenge Grant, 2003-2006, \$100,000.

DEBRA S. KORTE

124 ACES LIAC, 1101 S. Goodwin Avenue, Urbana, Illinois 61801 | (217) 244-8086 | dskorte@illinois.edu

SUMMARY OF TEACHING & LEARNING EXPERTISE

- Award-winning teaching professor with more than two decades of proven impact in agricultural education and curriculum development
- More than nine years of experience as trusted administrator and project manager of educational programs in the College of ACES
- Successful manager of approximately \$400,000 of grant funds, sponsorship of graduate degree coursework, and execution of educational initiatives
- Author of 21 published works and conference presentations on the scholarship of teaching and learning, pedagogical practices, and emerging issues in teacher development

EDUCATION

- 2017** **Doctor of Philosophy** | University of Missouri, Agricultural Education
Doctoral Dissertation: Korte, D. (2017). The influence of social support on teacher self-efficacy in novice agricultural education teachers. Advisor: Dr. Jon Simonsen
- 2009** **Master of Science** | Eastern Illinois University, Educational Leadership Administration
Type 75 (Secondary Education) Administrative Certificate
- 2002** **Bachelor of Science** | University of Illinois at Urbana-Champaign, Agricultural and Environmental Communications & Education
Secondary Teaching Certificate in General Science and Agricultural Business and Management

PROFESSIONAL EMPLOYMENT

- 2020-present** **Director for Learning Innovation and E-learning | Teaching Associate Professor**
University of Illinois, College of Agricultural, Consumer, and Environmental Sciences
- 2012-2020** **Teaching Assistant Professor**
University of Illinois, Agricultural Leadership, Education and Communications Program
- 2009-2012** **Assistant Communications Director and Training Coordinator**
Software Solutions Integrated, LLC, Shelbyville, Illinois
- 2008-2011** **Adjunct Instructor and Education Outreach Coordinator**
Lake Land College Agriculture Department, Mattoon, Illinois
- 2008-2009** **Curriculum Development Consultant**
MyCAERT, Danville, Illinois
University of Illinois Information Technology and Communication Services
- 2002-2008** **Agriculture Education Instructor**
Kansas CUSD #3, Kansas, Illinois

GRANTS FOR EDUCATIONAL INITIATIVES

- 2012-present** **Administrator/Principal Investigator**, Illinois State Board of Education (ISBE)
Instructional Grants
- Secured **\$185,452 of funding** from **18 grants** offered by ISBE
 - Develop and submit budget proposals for the Incentive Funding (IFG) and Growing Agricultural Science Teachers (GAST) grants for **9 consecutive years**
 - Submit the IFG Indicators Application to the Illinois State Board of Education

PUBLICATIONS & PRESENTATIONS

Publications in Peer Reviewed Journals

- Leman, A., **Korte, D.** and Ball, A. (in press). Faculty and student perceptions of the learning experience in an emergency transition to online learning. *North American Colleges and Teachers of Agriculture (NACTA) Journal*.
- Korte, D.S.**, Mott, R., Keating, K.H., & Simonsen, J.C. (2020). Choosing a life of impact: A grounded theory approach to describe the career choice of becoming a teacher. *Journal of Human Sciences and Extension*, 8(2), 237-259. <https://www.jhseonline.com/article/view/1069/841>
- Solomonson, J.K., Thieman, E.B., **Korte, D.S.**, Retallick, M.S. (2019). Why do they leave and where do they go? A qualitative study of Illinois school-based agriculture teachers who left the profession. *Journal of Agricultural Education*, 60(4), 115-131. doi:10.5032/jae.2019.04115.
- Solomonson, J.K., **Korte, D.S.**, Thieman, E.B., Retallick, M.S., & Keating, K.H. (2018). Factors contributing to Illinois agricultural educators' final decision to leave the classroom. *Journal of Agricultural Education*, 59(2), 321-342. doi:10.5032/jae.2018.02321.
- Korte D.S.** & Simonsen, J.C. (2018). The influence of social support on teacher self-efficacy in novice agricultural education teachers. *Journal of Agricultural Education*, 59(3), 100-131. doi:10.5032/jae.2018.03100.
- Gezer-Templeton, G. Mayhew, E., **Korte, D.**, & Schmidt, S. (2017). Use of exam wrappers to enhance students' metacognitive skills in a large introductory food science and human nutrition course. *Journal of Food Science Education*, 16(1), 28-36. doi:10.1111/1541-4329.12103.

Presentations at Regional & National Conferences

- Korte, D.S.** & Schmidt, S. (2019, June). *Starting with the End in Mind: Introducing Career Ready Practices to First Semester Freshman*. Poster presented at the annual meeting of the North American Colleges and Teachers of Agriculture Conference, Twin Falls, ID.
- Korte, D.S.** & Schmidt, S. (2019, June). *Helping Students Develop and Mature as Scientists*. Poster presented at the annual meeting of the Institute of Food Technologists, New Orleans, LA.
- Korte, D.S.** & Schmidt, S. (2018, July). *Exploring the influence of course elements on students' approaches to learning in a large enrollment introductory food science and human nutrition course*. Poster presented at the annual meeting of the Institute of Food Technologists, Chicago, IL.
- Korte, D.** & Simonsen, J. (2017, September). *The influence of social support on teacher self-efficacy in novice agricultural education teachers*. Research presentation at the annual meeting of the North Central American Association for Agricultural Education, Ames, IA.
- Schmidt, S., **Korte, D.**, Reitz, N., Gezer-Templeton, G., & Mayhew, E. (2017, June). *Helping students learn both course content and best learning practices*. Poster presented at the annual meeting of the North American Colleges and Teachers of Agriculture Conference, West Lafayette, IN.

HONORS & ACHIEVEMENTS

- 2013-present** CITL List of Teachers Ranked as Excellent by Students (28 semesters, 6 for online course)
- 2020** Nominee for Association of Public & Land-Grant Universities USDA National Institute of Food and Agriculture Excellence in College & University Teaching in the Food & Agricultural Sciences
- 2018** NACTA Educator Award, North American Colleges and Teachers of Agriculture
- 2018** Specialized Faculty Teaching Award, College of Agricultural, Consumer and Environmental Sciences (ACES)

Elissa Thomann Mitchell, Ph.D., LSW, CFLE (she/her)
Teaching Associate Professor
Department of Human Development & Family Studies
University of Illinois at Urbana-Champaign
thomann2@illinois.edu

EDUCATION

- 2013 Ph.D., Human Development and Family Studies
University of Illinois at Urbana-Champaign
- 2006 M.S.W., Mental Health Specialization
M.S., Human & Community Development
University of Illinois at Urbana-Champaign
- 2003 B.S., Psychology, Interpersonal Communication
University of Evansville

LICENSE & CERTIFICATION

- 2022 *Licensed Social Worker*, State of Illinois (#150.108253, exp 11/30/23)
2020 *Certified Family Life Educator (CFLE)*, NCFER (exp 1/31/2025)

PROFESSIONAL EMPLOYMENT

Academic Appointments

- 2023 – present Teaching Associate Professor, Department of Human Development & Family Studies, University of Illinois at Urbana-Champaign
- 2018 – 2023 Director, Center for Social Justice Education, University of Southern Indiana
- 2015 – 2023 Associate Professor (2021 – 2023) / Assistant Professor (2015 – 2021),
Social Work Department, University of Southern Indiana
- 2014 – 2015 Faculty Fellow, Center for Online Learning, Research, & Service, University of Illinois at Springfield
- 2013 – 2015 Assistant Professor, Department of Human Services, University of Illinois at Springfield
- 2008 – 2013 Graduate Research & Teaching Assistant, Human and Community Development, University of Illinois at Urbana-Champaign
- 2007 – 2008 Instructor, Human and Community Development, University of Illinois at Urbana-Champaign
- 2004 – 2006 Graduate Research & Teaching Assistant, Human and Community Development, University of Illinois at Urbana-Champaign

Other Professional Experience

- 2023 – present Online Education Consultant, College of ACES, University of Illinois at Urbana-Champaign
- 2017 – 2023 Adjunct Instructor: Eastern Illinois University, University of Illinois at Urbana-Champaign, & Wilmington University
- 2017 – 2020 Course Developer & Reviewer, Applied Family Science, Wilmington University
- 2007 – 2013 Director of Network and Outreach, Generations of Hope Development

Corporation, Champaign, Illinois
 2005 – 2007 Family & Child Support Worker; Family Intervention Team; Research and Evaluation Assistant, Generations of Hope, Rantoul, Illinois
 2004 Mental Health Technician, Adult and Child Health, Indianapolis, Indiana
 2002 – 2003 Mental Health Technician, Southwestern Indiana Mental Health Center, Evansville, Indiana

SCHOLARSHIP

(abbreviated list; only work since 2020)

Publications

Mitchell, E. T. (2022). Macro practice. In K. Zgoda (Ed.) *Active learning lessons, activities, and assignments for the modern social work educator* (pp. 178-187). Routledge.

Mitchell, E. T. (2022). Social justice and activism. In K. Zgoda (Ed.) *Active learning lessons, activities, and assignments for the modern social work educator* (pp. 329-330). Routledge.

Mitchell, E.T., & Gilles, E.E. (2021). "I now feel more comfortable advocating for people:" Student reflections on service learning. *Journal of Human Services: Training, Research, and Practice*, 7(2), Article 1. <https://scholarworks.sfasu.edu/jhstrp/vol7/iss2/1>

Mitchell, E.T., Whittaker, A.L., Raffaelli, M., & Hardesty, J. (2021). Child adjustment after parental separation: Variations by gender, age, and maternal experiences of violence during marriage. *Journal of Family Violence*, 36, 979-989. <https://doi.org/10.1007/s10896-021-00252-x>

Mitchell, E.T. (2021). The importance of intergenerational relationships. *The Minka Monthly Newsletter*, p. 3. <https://www.usi.edu/media/5637046/november-minka-monthly-newsletter.pdf>

Mitchell, E.T. (2021). Steps to becoming an activist. *Illume*, 11. <https://www.usi.edu/media/5631964/illume-spring-2021-web-full-spreads.pdf>

Presentations

Mitchell, E.T. (2023, November). *Embracing choice: Student-led service learning*. Presentation at the Original Lilly Conference on College Teaching, Oxford, OH.

Mitchell, E.T. (2023, November). *Request for proposals: Teaching grant writing through active learning*. Presentation at the National Council on Family Relations Conference, Orlando, FL.

Mitchell, E.T. (2023, November). *Providing support to NICU families during COVID: A program for the way we are now*. Presentation at the National Council on Family Relations Conference, Orlando, FL.

Mitchell, E.T., & Crossman, K.A. (2023, October). *Course mapping: Rethinking the basics of course development*. Presentation at the Teaching Professor Online Conference, Virtual.

Crossman, K. & Mitchell, E.T. (2023, October). *Strategies for engaging students in reading and writing about research*. Presentation at the Teaching Professor Online Conference, Virtual.

- Mitchell, E.T.** (2023). *Course mapping: Rethinking the basics of course development*. Invited speaker at workshop for College of ACES Online Development, Champaign, IL.
- Mitchell, E.T.**, Dillingham, J., & Maynard, Q.R. (2022, November). *Creating structure and support for student success*. Presentation at the Online Learning Consortium Conference, Virtual.
- Dillingham, J., **Mitchell, E.T.**, & Maynard, Q.R. (2022, October). *Another committee? How a technology committee supports student and faculty success in an online world*. Presentation at the Indiana Association of Social Work Educators Conference, Indianapolis, IN.
- Dillingham, J., & **Mitchell, E.T.** (2021, April). *Going online in a hurry: Using faculty peer mentors*. Presentation at the Social Work Distance Education Conference, Virtual.
- Mitchell, E.T.**, & Dillingham, J. (2021, March). *Informal mentoring of faculty teaching online: Strategies & techniques*. Presentation at the Online Learning Consortium Conference, Virtual.
- Mitchell, E.T.**, Gilles, E.E., & Huggins, V. (2021, February). *Teaching with service learning: A collaboration between social work and public relations faculty*. Presentation at the Indiana Campus Compact Summit, Virtual.
- Mitchell, E.T.** (2020, November). *Expanding the boundaries of teaching and learning in family science: Student engagement and learning*. Discussant for this session at the National Council on Family Relations Conference, Virtual.
- Mitchell, E.T.**, & Huggins, V. (2020, May). *Teaching macro practice through online and community engagement*. Presentation at the Influencing Social Policy MACRO Conference, St. Louis, MO. [Conference cancelled due to COVID-19].
- Huggins, V. & **Mitchell, E.T.** (2020, March). *Social media and service learning: Teaching macro practice through engagement*. Presentation at the Association of Baccalaureate Social Work Program Directors' Conference, Birmingham, AL [Conference cancelled due to COVID-19].
- Mitchell, E.T.** & Dillingham, J. (2020, March). *Technology in practice: Implications for social work educators and programs*. Presentation at the Association of Baccalaureate Social Work Program Directors' Conference, Birmingham, AL. [Conference cancelled due to COVID-19].