

TO: Bernd Buldt, Chair, Senate Executive Committee
FROM: Sarah S. LeBlanc, Chair, Curriculum Review Subcommittee
DATE: December 10, 2020
SUBJECT: Certificate in Agricultural Leadership

The Curriculum Review Subcommittee supports the proposal from the Department of Biology for the stand-alone certificate in Agricultural Leadership. We find that the proposal requires no Senate review.

Approving

Not Approving

Absent

Jaiyanth Daniel
Behin Elahi
Seth Green
Teresa Hogg
Shannon Johnson
Carol Lawton
Sarah LeBlanc
Haowen Luo

Terri Swim, exofficio (non-voting member)

Degree/Certificate/Major/Minor/Concentration Cover Sheet

Date:

Institution: Purdue

Campus: Fort Wayne

School or College:

Department:

Location: 50% or more online: Yes No

County:

Type:

Program name:

Graduate/Undergraduate:

Degree Code:

Brief Description:

Rationale for new or terminated program:

CIP Code:

Name of Person who Submitted Proposal:

Contact Information (phone or email):

Request for a New UNDERGRADUATE Certificate Program

Campus: _ Fort Wayne _____

Proposed Title of Certificate Program: _ Certificate in Agricultural Leadership _____

Projected Date of Implementation: _ August 2021 _____

NOTE: Undergraduate Certificates generally require 12-27 credits of undergraduate-level academic work.

I. Why is this certificate needed? (Rationale, including market research)

Northeast Indiana (11 counties) and western Ohio (14 counties as part of Purdue University Fort Wayne's reciprocity agreement) are dominated by agricultural land use. Over the last decade, the proportions of land uses have not changed in the region, with row crop agriculture accounting for nearly two-thirds of land area in northeast Indiana and three-quarters of western Ohio. Similarly, the proportions have only marginally changed for remaining areas of these states.

While corn is the dominant-yielding crop in the region, there have been increases in other agricultural products (e.g., soybeans, livestock, alfalfa hay, and wheat). Additionally, many of the counties in Purdue Fort Wayne's service region rank in the top-10 producing counties in Indiana for livestock sales (LaGrange, Kosciusko, Adams), alfalfa hay yield (Noble, Allen), and wheat yield (Steuben, Allen). The eleven counties served in Indiana by Purdue Fort Wayne account for 17 percent of the state's agricultural sales (while 12 percent of the state's land area) and the 14 counties in Ohio account for 25 percent of that state's agricultural sales (while 15 percent of the state's land area).

Such economically important and high-value farms (average value per acre in the region is higher than state averages) need to be managed effectively and efficiently. An agricultural leadership certificate program at Purdue Fort Wayne would provide important educational opportunities and act as a bridge for students seeking employment within agriculture as an industry. This certificate would directly serve those potential students, government agencies, and industrial partners. The certificate would facilitate exposure and experience in agriculture to students in a diverse set of majors from business and engineering to chemistry and organizational leadership.

The goal of this certificate program is to provide educational experiences to current and future Purdue Fort Wayne students to improve their competitiveness for employment opportunities within the region. In conversations with the Northeast Indiana Regional Partnership; AgriNovus Indiana; Kosciusko Agribusiness Roundtable; and the economic development corporations for Whitley, Kosciusko, DeKalb, Steuben, Van Wert, and Defiance Counties; there were common themes raised about this type of agriculture program. In many cases, employers are not necessarily looking to hire someone with a degree in agriculture – they are more interested in hiring someone with a finance, engineering, or other technical degree and experience in agriculture. The Certificate in Agricultural Leadership would provide that experience and exposure to students in any major within the University. Additionally, as a stand-alone undergraduate certificate,

returning students could gain necessary skills and experiences to pursue employment in the agricultural industry in the region.

The Certificate in Agricultural Leadership is also designed to fit into the structure of Purdue Fort Wayne's Bachelor of Applied Science degree program. This would provide opportunities for students from regional community colleges who have earned Associate of Applied Science degrees in various agriculture fields to transfer to Purdue Fort Wayne to continue their education and earn a bachelor's degree.

II. In narrative form, explain the major topics to be covered in the curriculum of the certificate.

The certificate will cover introductory macroeconomics at a national scale (AGEC 21700). Depending on the 300-level agricultural economics course selected, students will cover topics in agribusiness marketing (e.g. processes, research, strategies, etc.[AGEC 32700]) or quantitative decision making in agribusiness (e.g. mathematics, computing, strategies, etc. [AGEC 35200]). Depending on the 200-level organizational leadership course selected, students will cover topics in foundational individual/group behavior in organizations (e.g. interpersonal relationships, leadership relationships, etc. [OLS 25200]) or fundamental concepts in leadership (e.g. supervisory relations, personal development, etc. [OLS 27400]).

The elective agricultural science courses cover a broad range of introductory material, which varies depending on the specific elective course selected. Topics covered will include livestock agriculture (e.g. animal science, production, processing, etc. [ANSC 10100]), insect biology with laboratory (e.g. structure, function, pest management, etc. [ENTM 20600/20700]), horticulture with laboratory (e.g. plant production, storage, processing, etc. [HORT 10100]), or human behavior regarding food (e.g. choices, foodways, value, culture, etc. [NUTR 20400]).

The required Capstone Professional Practice course will be in collaboration with a governmental agency or industrial partner to integrate the classroom theory regarding leadership, agricultural economics, decision-making, and science in an applied, real-world setting. This can be an existing Biology Professional Practice I (BIOL 18300) or a newly created course. This professional practice experience would require 40 contact hours with the employer per credit hour and would be graded as pass/fail.

III. How does this certificate complement the campus/college/departmental mission? Explain any relationship to existing programs on the campus or within the university.

Campus Mission

The certificate would provide a local educational resource for students within the region that would provide intellectual and economic advancement for those students.

College Mission

As an interdisciplinary certificate, agricultural leadership will add to the diversity of learning opportunities in the College of Arts and Sciences and will advance its liberal arts mission.

Departmental Mission

The elective courses offered by the Department of Biology would facilitate further scientific education to non-science majors in an effort to bolster scientific inquiry in interdisciplinary fields.

IV. Describe any innovative features of the program (e.g., involvement with local or regional agencies, or offices, cooperative efforts with other institutions, etc.)

There are two innovative features of the Certificate in Agricultural Leadership program.

- 1) The program is interdisciplinary with required courses taught by the Department of Agricultural Economics at Purdue West Lafayette and the Department of Organizational Leadership at Purdue Fort Wayne, as well as most elective courses taught by the Department of Biology at Purdue Fort Wayne.
- 2) The Capstone Professional Practice course will provide an internship or co-op type experience for students working with a government or industrial partner. Such an experience will ensure that classroom theory regarding agricultural leadership, decision-making, and science will be integrated into an applied setting.

V. What methods of delivery will be used for this program (check all that apply)?

- Residential (9 to 10 credits)
- Hybrid
- Online (6 credits)

Are all courses to be offered hybrid or online approved in Curriculog for that mode of delivery? Yes No

VI. List the major student learning outcomes (or set of performance based standards) for the proposed certificate.

Upon completion of the Certificate in Agricultural Leadership, students will be able to:

1. Apply economic and organizational leadership principles to agricultural enterprises.
2. Demonstrate the connections between biological science and industrial productivity within agriculture.
3. Integrate classroom theory into agricultural experience through a capstone professional practice experience.

VII. Explain how student learning outcomes will be assessed (student portfolios, graduate follow up, employer survey, standardized test, etc.) and describe the structure/process for reviewing assessment findings for the purpose of ensuring continuous improvement of the certificate.

Learning outcomes will be assessed in the individual courses required for the certificate. Overall learning outcome assessment will be tied to the Capstone Professional Practice course. Outcome #1 will be assessed in the completion of AGECE 21700, AGECE 32700 or 35200, and OLS 25200 or 27400. Outcome #2 will be assessed in the completion of the elective science course. Objective #3 will be assessed in the completion of the Capstone Professional Practice course, which will include evaluation by the partner organization (e.g. government agency, industrial partner, etc.) as well as the professional practice faculty advisor (i.e. certificate program director).

VIII. Describe target audience to be served as well as the goal for the number of participants. What are the admission requirements?

Students with interest in pursuing career opportunities within agricultural business, leadership, management, or associated sciences.

IX. List all specific program completion requirements, including all required courses, minimum course GPA, minimum overall GPA to earn certificate, maximum number of transfer credits, etc.

A minimum GPA of 2.3 is required in all certificate Required and Elective courses.
A minimum overall GPA of 2.0 is required.
A maximum of 6 credits may be transferred.¹

Required (12 credits)

Name	Course	Credits
Economics ¹	AGEC 21700	3
Principles of Food and Agribusiness Marketing ¹	AGEC 32700	3
<i>or</i>		
Quantitative Techniques in Decision Making ¹	AGEC 35200	3
Human Relations in Organizations	OLS 25200	3
<i>or</i>		
Applied Leadership	OLS 27400	3
Capstone Professional Practice	BIOL 18300	3

Electives (3-4 credits)

Name	Course	Credits
Animal Agriculture	ANSC 10100	3
General Entomology	ENTM 20600/20700	4
Fundamentals of Horticulture	HORT 10100	3
Food, History & Culture	NUTR 20400	3

¹Courses that would be offered online in collaboration with the Purdue University College of Agriculture.

X. List and indicate the resources required to implement the proposed program. Indicate sources (e.g., reallocations or any new resources such as personnel, library holdings, equipment, etc.) of resources.

AGEC courses will be offered online in collaboration with the Department of Agricultural Economics and College of Agriculture at Purdue West Lafayette. These AGECE courses are already delivered online. Dr. Karen Plaut (Dean of the College of Agriculture), Dr. Jayson Lusk (Chair of Department of Agricultural Economics), and Jeff Nagle (Purdue AgOnline Program Manager) are in support of this collaborative relationship (i.e. Purdue Fort Wayne students enrolling in online AGECE courses for the certificate program). There is further logistics work that likely will be necessary with Jeff Nagle related to course registration and fee processing.

All other course offerings are currently listed in the Purdue Fort Wayne catalog and taught by current faculty.

XI. Include a Liaison Library Memo.

Attached.

Certificate courses in OLS, ANSC, ENTM, HORT, and NUTR would be covered by existing library resources purchased and maintained for those departments. However, AGECE courses would fall under the “lack of collection” noted in the library memo. It is unclear how large of a collection would be necessary as those AGECE courses will initially be taught by Department of Agricultural Economics faculty members in the College of Agriculture at Purdue West Lafayette. As students are taking those courses via West Lafayette, they should have access to resources from that campus. However, if an agricultural economics faculty member were to be added to the Purdue Fort Wayne campus and those courses could be offered here, then there would be a need to build a collection to support that faculty member and the courses necessary for this certificate.

Date: 8/19/2020

From: Shannon Johnson

To: Jordan Marshall

Re: Certificate in Agricultural Leadership

Liaison Librarian Memo

Describe availability of library resources to support proposed new program:

The library has never collected materials related to agriculture. Given the nature of this program, a mix of agriculture and business resources would need to be added, targeted to the needs of the program. These resources would fall into three categories: database/indexes for discovery, journal subscriptions for full-text, and monographic/media content for reference and background. This does not include the additional cost for increased use of Document Delivery Services or the staff time required to select, process, and handle these materials, or any instructional/reference needs of students and faculty within the certificate.

Databases/Indexes:

Existing business databases would hopefully be able to full-fill part of the need, which would leave the agriculture indexing lacking. While the biology databases/indexes Scopus and Biological Sciences are already subscribed to, agriculture indexes like CAB Direct are not and would potentially require new subscriptions. Whether this database is required would depend greatly on the course assignments and how they might be affected by this additional certificate.

Journals:

Given the lack of collection in this area, it would be reasonable to expect one or two journals would need to be added to cover this moving forward. Pricing on these could vary between \$1,000 a year to in upwards of \$10,000 depending on the titles. I would suggest relying on Document Delivery for the first year or two of the program and use the data from requests to see which journals are the most critical.

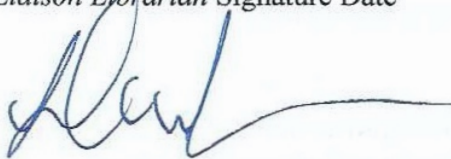
Monographic/media:

This is a subject area we have not collected in. While the majority of the courses as outlined are preexisting, the move towards a new subject concentration would require an update to the collection. Once updated, maintaining it should be possible with existing funds. To jump start the collection, I would estimate around 100 titles would be needed and at an average of around \$150 a book, or \$15,000 to start.

Comments:

With a new program area such as this, it is difficult to predict needs without having students and faculty in place. What can be said is that no matter the pre-existing courses, new certificates and programs that attract additional students require additional resources. With library staffing at a the lowest it has been in decades, and with the recent 20% reduction to the collections budget there is no pool of funding to cover the new collection area, or to offset any extra expenses for copyright and document delivery that would be incurred while we waited to determine which publications were most needed. While most certificates fall within areas that the library has at least passively collected in, agriculture and related subjects has always been an area we have actively NOT collected. To say the existing collection in this area is poor is a vast understatement – it simply doesn't exist. While this can be remedied, it will take time and money to do so. Given the current budget situation in the library, to subscribe to any new journal or index would require canceling another resource. Redirecting such a large sum from the monographic budget would mean taking resources away from existing programs. In order to make such a large shift in the collection without negatively impacting other programs, an increase would be needed.

Liaison Librarian Signature Date



8/19/2020



Undergraduate Academic Program Memo

Date: 11/13/2020

From: **Jordan Marshall**

To: **Elliott Blumenthal, Chair**

Re: Certificate in Agricultural Leadership

Brief description of the program:

The Certificate in Agricultural Leadership is an interdisciplinary program focusing on providing students with experiences in both the business and scientific sides of agriculture. Course include topics in economics, marketing, decision making, organizational leadership, and electives in associated agricultural science. As a stand-alone undergraduate certificate program, Agricultural Leadership can be pursued by current undergraduate students enrolled in any major, as well as new or returning students.

Brief rationale for program request:

Northeast Indiana (11 counties) and western Ohio (14 counties as part of Purdue University Fort Wayne's reciprocity agreement) are dominated by agricultural land use. Row crop agriculture accounts for nearly two-thirds of land area in northeast Indiana and three-quarters of western Ohio. The eleven counties in Indiana account for 17% of the state's agricultural sales (while 12% of state's land area) and the 14 counties in Ohio account for 25% of the state's agricultural sales (while 15% of state's land). An agricultural leadership certificate program at Purdue Fort Wayne would provide important educational opportunities and act as a bridge for students seeking employment within agriculture as an industry. This certificate would directly serve those potential students, government agencies, and industrial partners.

CIP Code: 01.9999

For completion by Office of Academic Affairs

DocuSigned by:

Elliott Blumenthal

11/13/2020

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Department Chair Signature

Date

DocuSigned by:

Ron Friedman

11/13/2020

E296E0E8D8864C0...

School Dean Signature

Date

DocuSigned by:

Carl Drummond

11/16/2020

-27109142004745C...

Vice Chancellor for Academic Affairs Signature

Date

PLEASE NOTE: The Office of Academic Affairs will collect electronic signatures from the Chair, Dean, and Vice Chancellor for Academic Affairs after the form has been filled out and submitted to the Associate Vice Chancellor for Academic Programs with the rest of the program proposal.