Establishing a Graduate Certificate Program
Revised and submitted November 6, 2020

The first step in establishing a new graduate certificate is the preparation of a proposal by qualified group of faculty. If the proposed program will be focused in an existing department, program or college, the proposal should be routed through the corresponding curriculum committees. College curriculum committees will forward the appropriately amended proposal to the Graduate College Catalog and Curriculum Committee. Proposals for interdisciplinary programs with no obvious departmental or college focus shall be submitted directly to the Graduate College Catalog and Curriculum Committee. The proposal will be reviewed by the Graduate Curriculum and Catalog Committee, by the Graduate Council, by the Graduate Dean, and by the Provost.

The following information should be included in the proposal:

1. Name of the proposed graduate certificate.

**Certificate in Education and Outreach in Agriculture and Natural Resources (ANR)**

**Audiences.**

Note: Applicant may, or may not, be enrolled in a masters or doctoral degree program at the time of entry. They are not required to demonstrate interest in entering a degree program for successful entry into a certificate program.

**Applicants:**

- May be current full-time extension educators, government staff, nonprofit staff, farm advisors, or industry employees with responsibilities in agriculture, food, and natural resources; and who may teach a combination of youth and adults in nonformal and formal settings.

- May be volunteers or part-time staff of youth and adult organizations, such as fair boards or food pantry community garden programs; digital education campaigns for commodity groups; women’s farmer organizations; conference and event organizers; zoo, museum, and naturalist staff; watershed groups, organic and sustainable farming groups; Tribal agriculture and natural resource programs; urban farming coalitions; international agricultural exchanges; and others.

- Most will state that they want to advance themselves by *serving in education and outreach capacities* in ways that are new and more successful than in the past, while remaining anchored to agricultural, foods, and natural resources topical areas.
**Distribution of the program**

**Required Courses**
- Online, nationally, using LMS (currently, Canvas)
- Asynchronous and synchronous instruction, mixed within and across courses and all terms.
- Multiple features used, including Zoom or WebEx videoconferencing.
- Use outside professional academic resources (peer review articles and journals, textbooks) as well as customized instructor-created videos, voice-over presentations, team-based projects, and interviews of experts.

**Elective Courses**

Some of the elective courses are part of cross-institutional programs in the Great Plains Interactive Distance Education Alliance (GPIDEA): Youth Development and Community Development. We document this fact here because the GPIDEA rules are different, for some procedures, for students who are not formally matriculated in GPIDEA programs but enroll in courses. We note those differences below.

- GPIDEA (Great Plains Interactive Distance Education Alliance) courses may use a different LMS because the courses are sometimes offered by a different institution.
- GPIDEA courses may require students to complete a form available at the Brenton Center (personal communication M. Zander, 2/25/2020).
- GPIDEA courses may have a waiting list for enrollees not matriculated into their program but our experience has shown that this requirement has not delayed student completion.
- PLP/HOR/ENT/AGRON 581x (1 cr.) is on campus, face to face, and a travel course and may not be accessible to all students, but it valued for others due to its unique opportunity.

**Demand.**

According to the ISU Brenton Center, the most likely enrollment for distance courses for CALS courses are from the following states, in descending batches: Iowa and Minnesota; then IL, MO; then NE, CA; then WI, TX, IN, MI, SD, PA, GA, KS, NC, OH (G. Scofield, personal communication, Oct. 2, 2019). Changes in future fee structure may decrease enrollment but we cannot predict the extent, at this time. On the other hand, economic conditions may shift students from degree programs to an online certificate program, increasing applications, both within Iowa and from other states.

2. **Name of the departments and/or programs involved.**

- CALS: College of Agriculture and Life Science; lead department, Agricultural Education and Studies. AGEDS has MS and PhD programs with combined active enrollment of about 60, with most (45) in the master of science program, which is mainly a distance program.
- College of Human Sciences, HDFS, GPIDEA, Youth Development [accessed here](#)
- Community and Regional Planning/CALS Community Development [GPIDEA programs here](#)

3. **Name of the contact person.**

Nancy Grudens-Schuck, Associate Professor, Agricultural Education and Studies [access here](#)

Email: [ngs@iastate.edu](mailto:ngs@iastate.edu)
4. Need for the graduate certificate.
A primary audience is working extension educators. The certificate is structured to enhance the social and education proficiencies of extension educators who have at least some responsibilities in agriculture, foods, and natural resources (ANR). Extension staff in ANR are professional prepared in biophysical and engineering disciplines, but have achieved less in social and educational domains (J. Lawrence, personal communication, March 2018). This pattern holds nationally. Iowa provides ongoing but brief professional development that is not typically at a graduate level. A graduate certificate would offer greater breadth and depth, and receipt of a higher education certificate would add to the professional credentials of extension staff.

Core Competencies. For extension educators, the proposed certificate is designed to build on, and exceed, the depth of study provided by ISUEO Core Competencies categories for extension professionals listed here, including:

- Depth and Scope of ISU Extension and Outreach
- Equity and Diversity
- Partnership Development
- Development of Programs
- Delivery of Programs and Educational Opportunities
- Evaluation and Reporting

Job satisfaction. The certificate should also increase job satisfaction among extension professionals by including more social and education science subject matter. Harder et al. (2014) identified unfulfilled needs among dissatisfied staff: (a) such as a lack of "being a key leader in my community" and (lack of) "opportunit(ies) to work with youth in my community." The proposed certificate addresses these needs through AGEDS 580 (Leadership) and YOUTH electives. Berven et al. (2020) studied the value of professional competencies to extension educators themselves, which highly ranked communications, leadership, and partnership building, addressed through AGEDS 511, 524, 561, and 580; and C DEV 505. These findings may apply to many, but not all, individuals seeking the certificate from Iowa or from other states.

Professionals from employment sectors other than extension are expected to comprise about half of the student base. The audience is described under Applicants, and includes government and nonprofit sector staff and directors as well as industry professionals who want to complement content expertise with education and social and communication expertise.

Objectives of the graduate certificate.
1. Participants will distinguish, apply, and reflect upon research-based frameworks for adult and nonformal education and outreach.
2. Participants will develop and apply needs assessment, learning objectives, instruction, transfer of learning, and program evaluation approaches to revise and create nonformal curriculum with partners and communities.
3. Participants will recognize innovation processes for agricultural, foods, and natural resource and technology, and participate in adoption campaigns with partners and communities.
4. Participants will collaborate with leaders and communities and, informed by evidence and research, include ability, culture, gender, and other identities; and with awareness of justice issues and social inequities, to address important issues.
5. Participants will manage program evaluations by applying approaches and instruments that fit contemporary conditions, (R); and be able to use or recommend a wide range of methods from qualitative and quantitative perspectives (E).

6. Participants will apply extension and land-grant frameworks and will critically reflect on the history of the land-grant system.

7. Participants will increase skills and confidence in presenting verbally to large groups; virtually; at field days; and in line with professional and community standards. (E).

8. Participants will describe, distinguish, and reflect upon leadership relevant to their workplace, communities, personal growth, and in line with professional standards. (E)

4. General description of the graduate certificate.

The Certificate in Education and Outreach in Agriculture and Natural Resources is intended for those who are already working in extension, government, nonprofits, or the private sector, or for those who are preparing to work in the sectors yet want to include an education and social dimension. Successful applicants bring interests in agriculture, food systems, and natural resources. The certificate will advance professional preparation in the areas of program planning, needs assessment, and instruction for serving the needs of adults and youth in nonformal settings; specifically program evaluation, innovation and technology transfer, leadership, presentation skills, understanding audiences, and designing programs that enable us to work equitably and successfully across multiple communities and identities. This program is offered online.

5. Graduate certificate requirements including:

Admission standards and prerequisites for the certificate program.

- Rolling deadline.
- Undergraduate GPA: 3.0 and evidence of preparation in agriculture, foods systems, or natural resources.
- No GRE required.
- No Statement of Purpose required
- Certificate application.
- International students:
  - Internet-based TOEFL (IBT) score of 71 with a minimum score of 17 in both the Writing and Speaking sections.
  - Paper-Based TOEFL (PBT) score of 530
  - IELTS Overall band score of 6.0 with no sub score below 5.5
  - PTE Score of 48
Courses and seminars.

Total 15 credits.

Required: Nine (9) credits of Required (R) courses must be passed with a C or better.
Electives: Six (6) credits of electives (E) courses must be passed with a C or better.
Overall GPA of Certificate courses: minimum 3.0

<table>
<thead>
<tr>
<th>Designator</th>
<th>Course Title</th>
<th>Credit</th>
<th>Required/Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEDS 520</td>
<td>Instructional Methods for Adult and Higher Education in Agriculture and Natural Resources</td>
<td>3</td>
<td>R</td>
</tr>
<tr>
<td>AGEDS 524</td>
<td>Program Development and Evaluation for Agricultural and Extension Education</td>
<td>3</td>
<td>R</td>
</tr>
<tr>
<td>AGEDS 561</td>
<td>Technology Transfer for Agricultural and Extension Education</td>
<td>3</td>
<td>R</td>
</tr>
<tr>
<td>AGEDS 511</td>
<td>Professional Agricultural Presentation Practices</td>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>AGEDS 568x</td>
<td>Qualitative Interviews and Analysis</td>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>AGEDS 580x</td>
<td>A Survey of Leadership Theories</td>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>C DEV 505</td>
<td>Community Development II: Organizing for Community Change</td>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>PLP/HOR/ENT/AGR</td>
<td></td>
<td>Experience in Plant Science Extension and Outreach</td>
<td>1</td>
</tr>
<tr>
<td>YTH 520</td>
<td>Community Youth Development</td>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>YTH 530</td>
<td>Youth in Cultural Contexts</td>
<td>3</td>
<td>E</td>
</tr>
</tbody>
</table>

Table of Course Designators, Course Titles, Credits, and Required or Elective

Upper/Tan = Required courses
Lower/Green = Elective courses
*Alt summers, on campus

Course Substitutions and Cross Listings
This certificate is composed of existing courses from several departments and colleges. All but one is listed as a single-department course. Cross listing could be investigated as means for bringing students into the certificate.

Course substitutions are allowed, particularly of electives, by approval of the lead department graduate curriculum committee.
6. General description of the resources currently available and future resource needs:

- All AGEDS courses, except three experimental courses (AGEDS 568x, 580x, PLP/HOR/ENT/AGRON 581x) are currently in the catalog.
- All X courses were taught at least twice.
- All AGEDS courses utilize Canvas and have well developed (4 years or more) course shells, some peer reviewed, and Quality Matters aligned, and syllabi.
- For example, AGEDS 524 enrolls 25-30 students generally; and in fall 2020 (pandemic) is 19.

Alumni satisfaction. We share findings on an alumni survey of agricultural education graduate students because the Certificate is composed of many of the same courses, many of the same faculty, many using the same delivery method, and we intend to attract some of the same people. The findings should be transferrable. We conducted a study related to satisfaction of alumni regarding the graduate program in agricultural education in 2018 (Miller, 2019). Miller (2019) surveyed 135 graduates of the ISU Agricultural Education MS program, with 60% earning the degree by distance. They expressed a high degree of satisfaction overall, except with costs and lack of scholarships. About 80% of students had prior experiences in agriculture or agriculture programs. Women were a majority. The students reporting were predominantly, but not exclusively, White. This study increased the Department’s confidence to expand into the areas of the proposed Certificate.

Minor and Specialization

Minor. AGEDS offers a graduate minor in Agricultural Education, which is intended for individuals outside of the major who are already enrolled in a graduate degree program. For the M.S. degree, 9 credit hours are required. AGEDS 550 is required. 6 additional credit hours are required from: 510, 520, 524, 533, 561, 625. Very few complete the minor. Access Minor

Specialization. AGEDS offers a graduate specialization in Agricultural Extension Education that goes on the transcript. The specialization is intended for those within the major. For the M.S., the specialization requires a graduate course in each of the following areas: program planning, program evaluation, and instructional methods. The thesis or creative component must be related to agricultural extension education. Access Specialization. Data from the Graduate College show that there have been 20 MS and Ph.D. since 2008, with about one or two specialization per year (S. Speer, personal communication, May 2, 2018). Our rate of completion has increased. For example, there were three in 2018. As proposed, a student would be able to earn a Certificate and a Specialization if they were in a degree program; but not a specialization if they were only in the certificate program.

a. A list of supporting faculty members including a brief description of their expertise relating to the graduate certificate.
Alphabetical

- **A. Dollisso, Ph.D.** Associate Teaching Professor, AGEDS. AGEDS 580x. AGEDS 315 Personal, Professional, and Entrepreneurial Leadership in Agriculture (3 cr). Co-Chair Diversity Equity Inclusion Faculty Senate; and Chair, AGEDS DEI. 2019 CALS Faculty Award for Diversity Enhancement

- **E. Hodgson, Ph.D.**, Associate Professor, Entomology; and **A. Nair, Ph.D.**, Associate Professor, Horticulture, and others associated with interdepartmental alternate summer course PLP/HOR/ENT/AGRON 581x. Most instructors have Extension appointments. Hodgson is ANR Extension Team leader. With others, they manage the seminar to acquaint graduate students with extension.

- **M. Gillette**, Ph.D. Assistant Teaching Professor, HDFS, Lead Faculty for GPIDEA Youth Development degree programs and certificates (2), and teaches YOUTH courses at this time.

- **N. Grudens-Schuck, Ph.D.** Associate Professor, AGEDS. AGEDS 524, 568x, also AGEDS 414, an extension and communications course, and 615A Writing for Publication. 2019 CALS Distance Education Teaching Award. Prairie strips extension team.

- **S. Smalley, Ph.D.** Associate Professor, AGEDS. AGEDS 520. Teacher Education Coordinator. 2018 Brenton Center Distance Education Teacher of the Year.

- **S. Qu, Ph.D.** AGEDS Assistant Professor, research area of communications, AGEDS 511. AGEDS 311, CALS agricultural communications undergraduate course.

- **C. Taylor, Ph.D.** ISUEO YOUTH 4-H Program Manager, AGEDS Instructor, AGEDS 561. Extension educator and professional

- **C DEV 505.** Not known.

b. The effects of any new courses on faculty workload.

The DOGE may have a greater workload if we combine the DOC with the DOGE. This is undecided at this time in AGEDS. We understand that course content and titles will shift as we understand our audience better, but see this as the normal work of updating the curriculum.

c. Other resources required for the program including graduate assistants, laboratories and other facilities, supplies, etc.

In addition to university supports, AGEDS distance education courses in CALS require technical support, including high quality video capture with closed captioning, and instructional design. We usually receive them from the Brenton Center for Agricultural Instruction and Technology Transfer; and sometimes services are funded from small internal grants, external funds, and faculty discretionary funds. In addition to university supports, Youth courses within HDFS are supported in instructional design and Canvas by the College of Human Science Online and Distance Learning unit in McKay Hall. The Brenton Center also supports the Community Development courses. Several departments share responsibility for PLP/HOR/ENT/AGRON 581x.

10. Relationship of the proposed graduate certificate to the strategic plans of the department, college, and the university.

**University Extension.** J. Lawrence, Vice President for Extension and Outreach, asked us to help him with a long-term initiative of enhancing skills and knowledge of Iowa extension professionals in the areas of teaching and learning. The endeavor would improve the rate of technology transfer, more successfully reach audiences that are in need, and build long lasting positive relationships with
stakeholders. He funded an RA in AGEDS in 2017-2018 for a student who surveyed MS programs on extension education nationally (Sands, 2018). Lawrence asked us to connect with an initiative, UTURN accessed here, that is working to expand and interweave Extension across campus. After several exchanges, and a shared workshop this summer (Community Watershed Model), it appeared the certificate is a smaller effort at this time, and also online versus U-Turn’s mainly resident initiatives. The connection may result in future collaborations.

**CALS.** AGEDS has included the Brenton Center in planning, and the certificate would serve the goals of the distance learning initiatives, which build a student recruitment base beyond and within Iowa. They bring flexibility to curricula, which is a crucial goal especially now that the pandemic has changed the lives of so many Iowans and others in our audience base.

**Departmental.** AGEDS’ plan for an online certificate is a trajectory we are prepared for given our long and successful distance masters program that draws students from other states. Moreover, the “teacher education” area has dominated our image and student base for many years, and we have several initiatives to enhance both communication and extension, in undergraduate and graduate programs. The certificate would be one of those efforts to establish balance. The certificate would be part of an effort to increase recruitment, to support retention, and to serve extension as part of the land-grant. It has also become more frequent that research and outreach are interdisciplinary, so a program that reaches broadly within agriculture, food, and natural resources makes sense for us, both in a leadership role and in a collaborative role. As more departments offer social and education courses online, from the CALS area, we can include them.

**11. Plan for periodic review of the certificate program.**

The Graduate College collects and reports data on students graduating with minors and specializations that appear on the degree. Reports on certificate enrollment are maintained by the DOGE/DOC, and completion by the Graduate College. These will be requested as part of regular reporting by our Graduate Admissions and Recruitment Committee meeting, chaired by the DOGE, and shared along with other data during Faculty and Staff meetings.

The Graduate DOGE of AGEDS holds regular in-person meetings of the standing Committee, appointed by the Chair, and discusses program in addition to assessing applicants. The DOGE reports, as well, admits, matriculation and other key data at faculty meeting. He also conducted a satisfaction survey in 2018 that reported on data from alum of the graduate programs from nearly a decade. This reporting and inquiry habit of the department is a guide to our willingness and capability to monitor and report systematically. For the Certificate, we would combine the positions of DOC and DOGE.

Data for all online activities, including course enrollments and comparisons, are maintained by the CALS Brenton Center for CALS courses, most of which are in the Certificate. Their director reports to the AGEDS faculty monthly and we learn about trends in access and usage that we might not be aware of as individual instructors. The External Review of AGEDS program was scheduled for April 2020 but the visit of external reviewers was canceled due to the COVID 19 pandemic. The review has been reschedule for spring 2021. Possibly, at this review, and the next, data regarding the Certificate program performance, should the Certificate program be approved and implemented.
Consultations
Additional consultations notes:

**Timespan.** Consultation mainly occurred from October 2019 to March 2020. The pandemic, and then pandemic/summer, made further direct activity more difficult. The proposal however was updated in August 2020.

We spent the most time consulting with four groups, besides AGEDS.

a) Youth Development masters programs faculty and staff in College of Human Science.
b) Community Development masters programs faculty and staff.
c) J. Lawrence VPEO and his working group members and staff.
d) A. Knapp and faculty, CALS Department of Agronomy Curriculum Committee.

- **YOUTH** (GPIDEA) CHS faculty and directors masters degree accessed here offers three related programs: a Youth Development masters degree, a Youth Specialist graduate certificate, and a Youth Program Management and Evaluation graduate certificate. Students in the agricultural education masters program have successfully enrolled in, and benefited from, YOUTH courses associate with these programs in the past. Key concerns we discussed were: could we list their courses, what were the right courses, what courses were undergoing changes at ISU and other institutions, and how did the wait list work for student from outside their program?

- **GPIDEA Community Development.** ISU offers GPIDEA C DEV MS accessed here. The Community Development online certificate is co-hosted at ISU by CHS. Students from AGEDS have enrolled in these courses less often than YOUTH courses, but our faculty felt they were important to reach learning goals of the current and future participants. Key concerns were: could we list their courses, what were the right courses, what courses were undergoing changes at ISU and other institutions, and to what degree was extension and rural or agricultural content included?

- **J. Lawrence VPEO** and his working group for Extension provided support for AGEDS for an RA to examine the issue of MS degrees nationally. He helped me to examine potential partners currently, and in the future, for a graduate certificate. He challenged AGEDS to consider scope, assisted in looking into improved mechanisms for support for tuition for extension staff, and other staff looked at data regarding staff holding masters and degree to which professional development provided similar educational topics. Extension is not our only potential audience but it is crucial to our mission.

- **A. Knapp, AGRON** and faculty, CALS Department of Agronomy Curriculum Committee, hosted me at a meeting and reviewed the proposal. Their comments were instrumental in changing the title, changing some learning objectives, and correcting other areas. Their comments included field staff reactions as well as faculty and staff.

The title of the proposed Certificate changed from: Certificate in Facilitation of Nonformal Education

To the following, based on consultations: Certificate in Education and Outreach in Agriculture and Natural Resources
<table>
<thead>
<tr>
<th>Unit</th>
<th>Dates</th>
<th>Results</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEDS faculty</td>
<td>11/9/2019 3/3/2020</td>
<td>8 yes; 1 abstain 8 yes; 0 nay</td>
<td>Original proposal approved New title approved</td>
</tr>
<tr>
<td>YOUTH Programs. Brenda Lohman, HDFS (no longer at ISU); Jennifer Margrett, HSFS, Assoc. Dean Grad Programs; Megan Gillette, HSFS, YOUTH Program Director; D. Sellers, CHS ISUEO</td>
<td>10/03/2019 2/4/2020 3/8/2020</td>
<td>Information exchanges. New name and updates.</td>
<td>Clarified waiting list, discussed scope, compared 4-H and curricular topics, availability of courses, and best courses to list</td>
</tr>
<tr>
<td>B. Wells, SOC</td>
<td>2/4/2020</td>
<td>Provided information</td>
<td>SOC courses mainly were not online, and not all were offered every year</td>
</tr>
<tr>
<td>F. Owusu, Chair, Community and Regional Planning</td>
<td>2/10/2020 2/21/2020</td>
<td>Proposal approved by department.</td>
<td>CDEV 505 added as elective</td>
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<tr>
<td>G. Welk (KIN) and C. Beecher (SOE) U-TURN accessed here</td>
<td>2/29/2020 3/8/2020</td>
<td>Various exchanges. New name and updates.</td>
<td>Their potential grad program was likely planned to be resident.</td>
</tr>
</tbody>
</table>
References


College of Human Sciences, Iowa State University. (2020). *Online Youth Development masters degree* [Webpage]. https://www.gpidea.org/program/youth-development

College of Agriculture and Life Sciences, University of Arizona. (2020). *Adult teaching graduate certificate*. [Webpage]. https://grad.arizona.edu/catalog/programinfo/ATCRTG


Iowa State University CALS Online Learning. (2020). *Community Development M.S.* [Webpage]. https://www.agonline.iastate.edu/programs/community-development-ms

Kansas State University. (2020). *Adult learning graduate certificate* [Webpage]. https://global.k-state.edu/education/adult-learning/certificate/


Notes on the form from the Curriculum process moved here. Note: Certificate-only students are not eligible for Federal Financial Aid unless the Certificate Program applies for approval to participate. If interested, contact the Student Financial Aid Office. Certificates that apply go through an application process requiring an agreement to follow the annual reporting and disclosure requirements, as set forth by the DOE under Gainful Employment federal regulations.