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 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 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 Canvas LMS.
- Asynchronous and synchronous instruction, mixed within and across courses.
- Multiple features used including Zoom or WebEx videoconferencing.
- Use of outside professional academic resources (peer review articles and journals, textbooks) as well as customized instructor-created videos, voice-overs, and interviews of experts.

Elective Courses
- GPIDEA (Great Plains Interactive Distance Education Alliance) may use a different LMS.
- GPIDEA courses 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.
- PLP/HOR/ENT/AGRON 581x (1 cr.) is on campus, face to face, and a travel course.

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 not the overall ratio. On the other hand, economic conditions may shift students from degree programs to an online certificate program, 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 masters program, which is mainly a distance program.
- College of Human Sciences, HDFS, GPIDEA, Youth Development accessed here
- GPIDEA Community and Regional Planning/CALS Community Development programs here

3. Name of the contact person.
Nancy Grudens-Schuck, Associate Professor, Agricultural Education and Studies access here
Grudens-Schuck ngs@iastate.edu will provide leadership for certificate.

4. Need for the graduate certificate.
The certificate is dedicated, in part, to enhancing the social and education proficiencies of extension educators who have at least some responsibilities in agriculture, foods, and natural resources. Extension staff have typically excelled in biophysical and engineering disciplines, and achieved less in social and educational domains. This pattern hold nationally. Iowa provides professional development, but a certificate would offer greater breadth and depth, and a higher education certificate with some heft professionally.
Core Competencies. The proposed certificate is designed to build on, and exceed, the depth of study provided by ISUEO Core Competencies 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. For example, 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; CDEV; and These findings may apply to many, but not all, individuals seeking the certificate from Iowa, or from other states.

The certificate program seeks to advance adult education and program planning of participants beyond levels sought in professional development programs. A goal is to enhance innovation and technology transfer outcomes, lower transaction costs, including social costs, and to build capacity and community goals. Most Extension professionals have been prepared in production and technical areas, but less in high-level adult education and program planning skills (J. Lawrence, personal communication, March 2018). The Certificate would address the gap through a series of required and elective courses.

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 sector. The certificate will advance professional preparation in program planning, needs assessment, instructional for serving the needs of adults and youth in nonformal settings; specifically program evaluation, innovation and technology transfer, leadership, presentation skills, understanding audiences, and for designing programs that enable us to work successfully across multiple communities and identities within them. This program is offered online. Applicants bring interests in agriculture, food systems, and natural resources.

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
IELTS Overall band score of 6.0 with no sub score below 5.5
PTE Score of 48
SAT If test was taken prior to March 2016, Critical Reading (CR) score of 420. If test was taken in March 2016 or later, Evidence-Based Writing and Reading (EWR) score of 460
ACT English sub score of 19
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.

<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 Innovation and 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>Interviews, Focus Groups, and Listening Sessions*</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>COMDEV 505</td>
<td>Community Development II: Organizing for Community Change</td>
<td>3</td>
<td>E</td>
</tr>
<tr>
<td>PLP/HOR/ENT/AGRON 581x**</td>
<td>Experience in Plant Science Extension and Outreach</td>
<td>1</td>
<td>E</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>

Tan = Required courses
Green = Elective courses
*Possible catalog title change
**Alt summers, on campus

Course Substitutions and Cross Listings
This certificate is composed of existing courses from several departments and colleges, although some of them are new (experimental courses). 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.

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 courses were taught at least once.
- All AGEDS courses utilize Canvas and have well developed course shells and syllabi.
- For example, AGEDS 524 enrolls 25-30 students.

Alumni satisfaction. A key indicator of program quality is alumni satisfaction related to the graduate program in agricultural education. The findings may be transferrable to the proposed Certificate
because many of the courses and instructors overlap. 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. Also from this study, courses maintain 1/3 students employed by extension and 2/3 employed by K-12 schools. The study pool included international students, for whom the ratio was switched (2/3 extension, and 1/3 schools). About 80% of students had prior experiences in agriculture or agriculture programs as youth in the schools or 4-H. Women were a majority. The students reporting were predominantly, but not exclusively, White. All students reported some college preparation in agriculture and life sciences, per admissions requirements.

Minor and Specialization

**Minor.** AGEDS offers a graduate minor in Agricultural Education. 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. 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. Specialization at ISU requires matriculation in and completion of a degree program. [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 undergrad course, and 615A Writing for Publication. 2019 CALS Distance Education Teaching Award.
- **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.
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’ plans 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. 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 not been rescheduled. 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 Comm 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 a crucial one.

- **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 program changed from
  
  - Certificate in Facilitation of Nonformal Education

  To the following, based on consultations:
  
  - Certificate in Education and Outreach in Agriculture and Natural Resources
## Decisions

<table>
<thead>
<tr>
<th>Unit</th>
<th>Dates</th>
<th>Results</th>
<th>Comments</th>
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<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>
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<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>
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<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>
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<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>
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</table>


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.
Academic Program Approval Voting Record

This document is to be appended as the last page of the proposal for any new or revised academic program to record the successive votes of approval as the proposal moves through its required review and approval steps. Consult Faculty Handbook Section 10.8 or the Faculty Senate Curriculum Committee website for information regarding Committee review and voting requirements for each action.

Curricular Action: (check appropriate boxes below)

1. X New Program □ Name Change □ Discontinuation □ Concurrent Degree for:
2. □ Undergraduate Major □ Graduate Major □ Undergraduate Minor □ Graduate Minor
   □ Undergraduate Certificate   X Graduate Certificate   □ Other: __________________________
3. Name of Proposed Change:
   Certificate in Education and Outreach in Agriculture and Natural Resources

4. Name of Contact Person: Nancy Grudens-Schuck e-mail address: ngs@iastate.edu

5. Primary College: CALS Secondary College: ______________________

6. Involved Department(s): AGEDS (lead), HDFS, Community and Regional Planning; PLP/HOR/ENT/AGRON

Voting record for this curricular action:

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<th>Voting Body</th>
<th>Votes</th>
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<tr>
<td>Dept. or Program Committee</td>
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<tr>
<td>AGEDS faculty</td>
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<td>11/9/2019</td>
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<td>3/3/2020</td>
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[FSCC – November 2013]